



रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS
सी ई एन आर पी एफ - ०१/२०२४ - CEN RPF - 01/2024



RRB RPF Sub-Inspector 2024

RPF Sub-Inspector (Executive) · CEN RPF 01/2024 · CBT · Arithmetic · Question Paper

English

All 15 Shifts (Sets) · Arithmetic Section · Official Answer Key

About this Compilation

This booklet contains all **15 shift papers** of the **RRB RPF Sub-Inspector 2024** examination in **English** (Arithmetic section only), with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

Sharad completes his journey in 8 hours. He covers half the distance at 90 km/h and the rest at 30 km/h. What is the length of the journey (in Km)?

A. 359

B. 356

C. 360



D. 354

Q2 Arithmetic

During sale, Raghav bought a notebook marked for ₹70 at 40% discount and a pen marked for ₹20 at 35% discount. How much (in ₹) did he save due to sale?

A. 35



B. 32

C. 38

D. 34

Q3 Arithmetic

Which of the following ratio is smallest?

A. 11 : 60



B. 29 : 42

C. 17 : 33

D. 19 : 36

Q4 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 910300 so that it is completely divisible by 11 is:

A. 6

B. 2

C. 5



D. 9

Q5 Arithmetic

Ketan sold 171 chairs and had a gain equal to the selling price of 95 chairs. What is his profit percentage?

A. 120%

B. 130%

C. 135%

D. 125%



Q6 Arithmetic

What will be difference in population 3 years ago and 2 years ago of a town, whose current population is 180000 and which is increasing at a rate of 25% every year?

A. 22490

B. 22290

C. 23040



D. 23390

Q7 Arithmetic

A solid hemisphere of iron is melted and recast into the shape of a right circular cylinder with a diameter of 9 cm and a height of 42 cm. Find the volume of the cylinder. (Use $\pi = 22/7$)

A. 1. 2673 cm³B. 2. 891 cm³C. 3. 668 cm³D. 4. 3564 cm³

Q8 Arithmetic

If a 1136 m long train crosses a pole in 71 seconds, then find the time (in seconds) taken by the train to cross a 656 m long platform.

A. 120

B. 112



C. 118

D. 110

Q9 Arithmetic

Manav's average earning per month in the first three months of a year was ₹76096. In April, his earning was 75% more than the average earning in the first three months. If his average earning per month for the whole year is ₹94660, then what will be Manav's average earning (in ₹) per month from May to December?

A. 96804

B. 96813

C. 96803

D. 96808



Q10 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹22272. In April, his earning was 75% more than the average earning in the first three months. If his average earning per month for the whole year is ₹84460, then what will be Lalit's average earning (in ₹) per month from May to December?

A. 113470

B. 113466

C. 113471

D. 113463

Q11 Arithmetic

The difference between the simple interest and the compound interest, compounded annually, on a certain sum of money for 2 years at 6% per annum is ₹78. Find the sum. [Give your answer to integral number without rounded off.]

A. ₹21652

B. ₹21682

C. ₹21666

D. ₹21672

Q12 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2400 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

A. 300

B. 1200

C. 2400

D. 600

Q13 Arithmetic

If the sum of the n observations is 160 and their average is 40, find the value of $7n + 15$.

A. 41

B. 43

C. 47

D. 45

Q14 Arithmetic

Evaluate 147^2

A. 21609

B. 21639

C. 21629

D. 21669

Q15 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 51 km/h and 42 km/h. The faster train passes the slower train in 16 seconds. The length of each train is:

A. 19 meters

B. 33 meters

C. 20 meters

D. 30 meters

Q16 Arithmetic

A number when increased by 50 %, gives 3720. The number is:

A. 7440

B. 4960

C. 1240

D. 2480

Q17 Arithmetic

The average price of three items of furniture is Rs 15915. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 7427

B. 15915

C. 9549

D. 22281

Q18 Arithmetic

If third proportional of 76 and 38 be x , then what is the value of x ?

A. 19

B. 17

C. 22

D. 16



Q19 Arithmetic

Given that $40^{0.11} = x$, $40^{0.1} = y$ and $x^z = y^2$, then the value of z is close to:

A. 2.72

B. 1.16

C. 0.09

D. 1.82

**Q20 Arithmetic**

The list price of a washing machine is ₹41000. It is sold to a retailer after two successive discounts of 12% and 30%. The retailer wants to earn a profit of 25% on its cost price after allowing a 50% discount (on its new list price) to the customer. At what price should he list the washing machine?

A. ₹62956

B. ₹63076

C. ₹63140



D. ₹62967

Q21 Arithmetic

Rahul covers 734 km in a boat in 30 hours against the stream and he takes 12 hours with the stream then find the speed of the stream?

A. 28.44 km/h

B. 11.88 km/h

C. 18.35 km/h



D. 19.07 km/h

Q22 Arithmetic

The average of 7 numbers is 53. If each number is increased by 6, what will the new average be?

A. 65

B. 53

C. 59



D. 7

Q23 Arithmetic

LCM and HCF of two numbers are 114 and 19 respectively. If one of the numbers is 57, then find the other number.

A. 35

B. 40

C. 36

D. 38

**Q24 Arithmetic**

$0.\overline{54} + 0.\overline{23}$

A. $\frac{771}{99}$

B. $\frac{771}{999}$

C. $\frac{771}{900}$

D. $\frac{771}{990}$



Q25 Arithmetic

The price (per litre) of petrol increases by 75%. By what percent should its consumption be reduced such that the expenditure on it increases by 33% only?

A. 70%

B. 76%



C. 82%

D. 75%

Q26 Arithmetic

$$\frac{1}{7} + \frac{2}{7} + \frac{5}{14} + \frac{4}{7} - 3 =$$

A. $-\frac{23}{14}$



B. $-\frac{13}{14}$

C. $-\frac{32}{14}$

D. $-\frac{27}{14}$

Q27 Arithmetic

The selling price of 16 books is equal to the cost price of 12 books. Find the loss or gain percentage.

A. $\frac{100}{3}\%$

B. 25 % gain

C. $\frac{100}{3}\%$

D. 25 % loss

**Q28 Arithmetic**

The HCF and the LCM of two numbers are 57 and 114, respectively. If one of the numbers is $\frac{9}{2}$ times of the other, what is the larger number?

A. 124

B. 154

C. 171



D. 186



Q29 Arithmetic

$$\frac{2}{3}, \frac{9}{87}, \frac{20}{21}, \frac{45}{66}$$

A. $\frac{2}{3}$

B. $\frac{20}{21}$ ✓

C. $\frac{45}{66}$

D. $\frac{9}{87}$

Q30 Arithmetic

Find the value of $\left[(32 \div 8) \times \left\{ \frac{15}{5} + \frac{30}{5} \times (7 - 2) \right\} \right]$

A. 149

B. 143

C. 132 ✓

D. 116

Q31 Arithmetic

Find the value of $\left[(35 \div 5) \times \left\{ \frac{12}{6} + \frac{25}{2} \times (9 - 7) \right\} \right]$

A. 170

B. 189 ✓

C. 172

D. 174

Q32 Arithmetic

Find the volume (in cm^3) of a cylinder that circumscribes a sphere with a radius of 2.8 cm. (Use $\pi = \frac{22}{7}$)

A. 142.984

B. 137.984 ✓

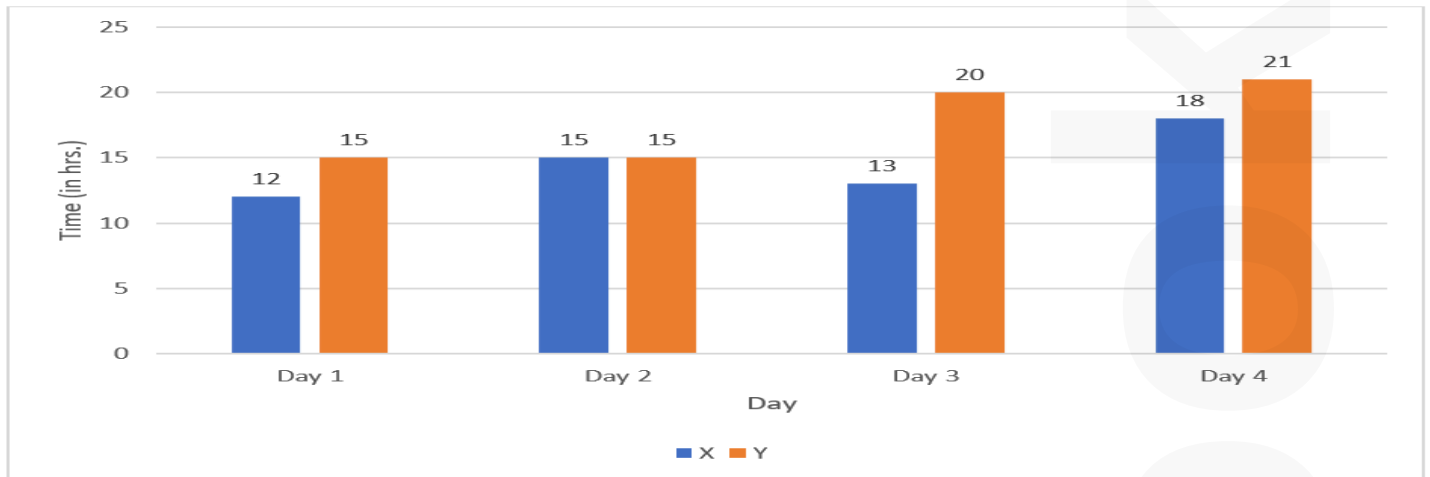
C. 145.984

D. 140.984



Q33 Arithmetic

Time taken (in hrs) by two trains X and Y to travel the distance from Lucknow to Chandigarh via the same route on four different days is given in the following bar graph. Study the graph carefully and answer the question given below:



If the distance between Lucknow and Chandigarh is 754 km, then what is the difference between the average speed (in km/hr) of the trains X and Y on Day 3?

A. 20.3



B. 15.8

C. 23.5

D. 18.5

Q34 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 6 when $y = 3$, find x when $y = 8$.

A. $\frac{156}{511}$



B. $\frac{158}{511}$

C. $\frac{157}{512}$

D. $\frac{156}{512}$

Q35 Arithmetic

The diameter of the base of a solid cone is 24 cm and its height is 21 cm. It is cut into three parts by two cuts which are parallel to its base. The cuts are at the height of 7 cm and 14 cm from the base, respectively. Find the curved surface area (in cm^2) of the top part. (use $\pi = 3.14$)

A. $15.46\sqrt{10}$

B. $14.65\sqrt{15}$

C. $12.56\sqrt{65}$



D. $12.56\sqrt{30}$



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 3 hours 30 minutes. He would have gained 3 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 7 hours 30 minutes
- B. 5 hours 15 minutes
- C. 6 hours 45 minutes
- D. 6 hours 15 minutes



Q2 Arithmetic

Given that $2^{0.83} = x$, $2^{0.09} = y$ and $x^z = y^5$, then the value of z is close to:

- A. 0.93
- B. 0.54
- C. 0.87
- D. 3.18



Q3 Arithmetic

The ratio of the heights of a right circular cone and a right circular cylinder is 4 : 3 and the ratio of the radii of their bases is 7 : 3. If the volume of the cylinder is 810 cm^3 , then the volume (in cm^3) of the cone is:

- A. 1960
- B. 1961
- C. 1955
- D. 1966



Q4 Arithmetic

Pranjal's average earning per month in the first three months of a year was ₹19008. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹99708, then what will be Pranjal's average earning (in ₹) per month from May to December?

- A. 138867
- B. 138869
- C. 138870
- D. 138871



Q5 Arithmetic

A bank offers 8.8% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹1924 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

- A. ₹257.69
- B. ₹247.69
- C. ₹267.87
- D. ₹249.4



Q6 Arithmetic

The population of a village was 130000. It increased by 10% in the first year and increased by 30% in the second year. Its population after two years is _____.

- A. 185900
- B. 182000
- C. 143000
- D. 169000



Q7 Arithmetic

A man sold an article for ₹630 by first giving a $d\%$ discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹700, then what is the value of d ?

- A. 8
- B. 5
- C. 9
- D. 7



Q8 Arithmetic

Atul sold 173 chairs and had a gain equal to the selling price of 73 chairs. What is his profit percentage?

- A. 68%
- B. 83%
- C. 73%
- D. 78%



Q9 Arithmetic

Evaluate: $33 \div 11 \times 3 - 3 \times 4$

- A. -4
- B. 0
- C. -1
- D. -3

**Q10 Arithmetic**

The area of a square plot is 15876 m^2 . The length of each side of the plot (in m) is:

- A. 126
- B. 118
- C. 106
- D. 128

**Q11 Arithmetic**

The smallest 1-digit number to be added to the 6-digit number 348510 so that it is completely divisible by 11 is:

- A. 7
- B. 5
- C. 9
- D. 3

**Q12 Arithmetic**

The average of eight numbers is 20. The average of five of these numbers is 16. The average of the remaining three numbers is

- A. 25.67
- B. 26.67
- C. 28.67
- D. 27.67

**Q13 Arithmetic**

Sunaina and Reema invest in a business in the ratio 3 : 8. If total profit is Rs. 3927, then what is difference between the profit (in Rs.) of Sunaina and Reema?

- A. 1935
- B. 1785
- C. 1885
- D. 1635

**Q14 Arithmetic**

Priya and Ayushi together invested ₹45600 in a business. At the end of the year, out of a total profit of ₹7500, Priya's share was ₹1800. What was the investment of Ayushi?

- A. ₹32910
- B. ₹34445
- C. ₹35535
- D. ₹34656

**Q15 Arithmetic**

20% of a number is more than 20% of 530 by 180. The number is:

- A. 1430
- B. 1280
- C. 1530
- D. 1480

**Q16 Arithmetic**

Find the simple interest (in ₹) on ₹2000 at 6.25% per annum rate of interest for the period from 14 February 2023 to 28 April 2023

- A. 23
- B. 26
- C. 25
- D. 24

**Q17 Arithmetic**

The average weight of 6 boxes is 14 kg and the weight of the first box is one-fifth of the remaining boxes. What will be the weight of the first box?

- A. 10 kg
- B. 16 kg
- C. 14 kg
- D. 12 kg

**Q18 Arithmetic**

Vishal covers 285 km in a boat in 45 hours against the stream and he takes 18 hours with the stream then find the speed of the stream?

- A. 9.17 km/h
- B. 7.51 km/h
- C. 4.75 km/h
- D. 3.35 km/h



Q19 Arithmetic

How many kilogrammes of rice costing ₹70/kg must be mixed with 63 kg of rice costing ₹90/kg so that there may be a gain of 15% by selling the mixture at ₹96.60/kg?

A. 27



B. 63

C. 36

D. 72

Q20 Arithmetic

Neha and Kajal invest in a business in the ratio 4 : 9. If total profit is Rs. 5590, then what is difference between the profit (in Rs.) of Neha and Kajal?

A. 2150



B. 2200

C. 2000

D. 2300

Q21 Arithmetic

If at same rate of interest, in 2 years, the simple interest is ₹60 and compound interest is ₹66, then what is the principal (in ₹)?

A. 154

B. 143

C. 145

D. 150

**Q22 Arithmetic**

Suraj covers 424 km in a boat in 48 hours against the stream and he takes 30 hours with the stream then find the speed of the stream?

A. 2.65 km/h



B. 10.24 km/h

C. 8.74 km/h

D. 9.49 km/h

Q23 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 12. The average of the remaining three numbers is

A. 32.33

B. 34.33

C. 33.33



D. 35.33

Q24 Arithmetic

Find the surface area of a sphere whose diameter is equal to 18 cm.

A. 1.69 cm²B. 2.792 cm²C. 3.324 cm²D. 4.886 cm²**Q25 Arithmetic**

During sale, Raghav bought a notebook marked for ₹50 at 78% discount and a pen marked for ₹100 at 8% discount. How much (in ₹) did he save due to sale?

A. 50

B. 44

C. 47



D. 45

Q26 Arithmetic

A hollow spherical shell is made of a metal of density 6 g/cm³. Its internal and external radius are 2 cm and 4 cm, respectively. What is the weight (in kg) of the shell?

(take $\pi = \frac{22}{7}$)

A. 2.73

B. 1.408



C. 3.28

D. 1.592



Q27 Arithmetic

A person covers certain distance in 7 hours at a speed of 4 km/h and some more distance in 2 hours at a speed of 2 km/h. Find his average speed for the entire distance covered.

A. $3\frac{5}{9}$



B. $2\frac{5}{9}$

C. $5\frac{5}{9}$

D. $4\frac{5}{9}$

Q28 Arithmetic

Find the value of $\left[(81 \div 3) \times \left\{ \frac{40}{8} + \frac{34}{2} \times (9 - 7) \right\} \right]$

A. 1037

B. 1067

C. 1053



D. 1071

Q29 Arithmetic

$$0.\overline{14} + 0.\overline{23} + 2$$

A. $2\frac{11}{9}$

B. $2\frac{19}{30}$

C. $2\frac{34}{90}$



D. $2\frac{17}{9}$



Q30 Arithmetic

Study the given table and answer the question that follows.

The table shows loan disbursed (in ₹ crores) by four banks in different years.

Banks	Years				
	1992	1993	1994	1995	1996
P	20	25	47	31	72
Q	28	35	20	43	39
R	31	32	24	18	15
S	33	18	29	34	44
Total	112	110	120	126	170

What was the percentage increase of disbursement of loans of all banks together from 1994 to 1995?

A. 5%



B. 7%

C. 10%

D. 8%

Q31 Arithmetic

$$\frac{4}{6} + \frac{1}{6} + \frac{4}{12} + \frac{3}{6} - 1 =$$

A. $\frac{15}{12}$

B. $\frac{8}{12}$



C. $\frac{7}{12}$

D. $-\frac{1}{12}$

Q32 Arithmetic

$$0.\overline{013} + 0.\overline{32}$$

A. $\frac{111}{990}$

B. $\frac{111}{999}$

C. $\frac{111}{330}$



D. $\frac{111}{333}$



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Q33 Arithmetic

$$\frac{6}{9}, \frac{7}{84}, \frac{48}{79}, \frac{48}{55}$$

A. $\frac{6}{9}$

B. $\frac{48}{55}$ 

C. $\frac{7}{84}$

D. $\frac{48}{79}$

Q34 Arithmetic

By selling an article at $\frac{3}{8}$ of its actual selling price, Sharad incurs a loss of 19%. If he sells it at 60% of its actual selling price, then the profit percentage is:

A. 30.6%

B. 31.9%

C. 29.6% 

D. 32.3%

Q35 Arithmetic

Find the value of $\left[(14 \div 7) \times \left\{ \frac{84}{6} + \frac{14}{2} \times (5 - 3) \right\} \right]$

A. 56 

B. 54

C. 46

D. 42



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 405437 so that it is completely divisible by 11 is:

A. 1



B. 3

C. 4

D. 2

Q2 Arithmetic

A vendor claims to sell wheat at a loss of 25%. But he cheats by using weights that weigh 55% less than what is mentioned on them. What is his profit percentage (rounded off to 2 decimal places)?

A. 66.78

B. 66.79

C. 66.66



D. 66.89

Q3 Arithmetic

Manish's average earning per month in the first three months of a year was ₹8784. In April, his earning was 25% more than the average earning in the first three months. If his average earning per month for the whole year is ₹99085, then what will be Manish's average earning (in ₹) per month from May to December?

A. 143961



B. 143958

C. 143962

D. 143960

Q4 Arithmetic

Which of the following ratio is smallest?

A. 22 : 56

B. 29 : 48

C. 30 : 31

D. 15 : 44



Q5 Arithmetic

Komal invested a sum of ₹5000 at 20% per annum compound interest, compounded annually. If she received an amount of ₹7200 after n years, the value of n is:

A. 1.4

B. 2.5

C. 3

D. 2



Q6 Arithmetic

400 chickooes were bought at ₹1410 per hundred and were sold at a profit of ₹860. Find the selling price (in ₹) per dozen of chickooes.

A. 185

B. 210

C. 195



D. 205

Q7 Arithmetic

At what rate per cent per annum will a certain sum of money multiply itself by 55 times in 2 years, the interest being compounded annually? [Give your answer correct to 1 decimal place.]

A. 638.5

B. 641.6



C. 644.2

D. 642.9

Q8 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 15. The average of the remaining three numbers is

A. 28.33



B. 27.33

C. 30.33

D. 29.33



Q9 Arithmetic

For a positive integer $b > 1$, if the product of two numbers 6344 and $42b8$ is divisible by 12, then find the least value of b .

A. 4



B. 3

C. 7

D. 5

Q10 Arithmetic

Anmol completes his journey in 10 hours. He covers half the distance at 46 km/h and the rest at 69 km/h. What is the length of the journey (in Km)?

A. 549

B. 561

C. 556

D. 552

**Q11 Arithmetic**

A water tank is in the form of a right circular cone with radius 3 m and height 14 m. The tank is filled with water at the rate of one cubic metre per second. Find the time taken, in minutes, to fill the tank.

A. 6.4

B. 1.5

C. 13.2

D. 2.2

**Q12 Arithmetic**

The population of a village was 130000. It increased by 10% in the first year and increased by 25% in the second year. Its population after two years is _____.

A. 162500

B. 178750



C. 175500

D. 143000

Q13 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2160 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

A. 540



B. 1080

C. 2160

D. 270

Q14 Arithmetic

A train runs at a speed of 84 kmph to cover a distance of 336 km and then at a speed of 96 kmph to cover a distance of 192 km. Find the average speed of the train for the entire distance.

A. 104 kmph

B. 73 kmph

C. 126 kmph

D. 88 kmph

**Q15 Arithmetic**

Given that $87^{0.27} = x$, $87^{0.15} = y$ and $x^z = y^6$, then the value of z is close to:

A. 3.33



B. 2.15

C. 3.16

D. 5.77

Q16 Arithmetic

A train runs at a speed of 111 kmph to cover a distance of 222 km and then at a speed of 86 kmph to cover a distance of 258 km. Find the average speed of the train for the entire distance.

A. 117 kmph

B. 96 kmph



C. 72 kmph

D. 86 kmph

Q17 Arithmetic

During sale, Raghav bought a notebook marked for ₹44 at 25% discount and a pen marked for ₹15 at 80% discount. How much (in ₹) did he save due to sale?

A. 23



B. 25

C. 21

D. 20



Q18 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹4080. In April, his earning was 75% more than the average earning in the first three months. If his average earning per month for the whole year is ₹66405, then what will be Lalit's average earning (in ₹) per month from May to December?

A. 97185



B. 97180

C. 97183

D. 97184

Q19 Arithmetic

A shopkeeper sells an item for ₹940.8 after giving two successive discounts of 84% and 44% on its marked price. Had he not given any discount, he would have earned a profit of 25%. What is the cost price (in ₹) of the item?

A. 8400



B. 8363

C. 8404

D. 8441

Q20 Arithmetic

Ishita and Isha invest in a business in the ratio 31 : 23. If total profit is Rs. 2646, then what is difference between the profit (in Rs.) of Ishita and Isha?

A. 442

B. 292

C. 242

D. 392

**Q21 Arithmetic**

The average weight of 8 men is decreased by 3 kg when one of them whose weight is 56 kg is replaced by a new man. What is the weight of the new man?

A. 34 kg

B. 36 kg

C. 32 kg



D. 30 kg

Q22 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 20. The average of the remaining three numbers is

A. 22

B. 19

C. 21

D. 20

**Q23 Arithmetic**

The price of fuel decreases by 60%, 30% and 20% in three successive months, but increases by 60% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price?

A. Increases by 67.33%

B. Decreases by 67.12%

C. Decreases by 64.16%



D. Increases by 61.74%

Q24 Arithmetic

Mansi and Neha together invested ₹40400 in a business. At the end of the year, out of a total profit of ₹5000, Mansi's share was ₹1900. What was the investment of Neha?

A. ₹24015

B. ₹26705

C. ₹23380

D. ₹25048

**Q25 Arithmetic**

If $28 \times 8 \times 988 \div \sqrt{2704} = y + 649$, then find the value of y.

A. 3608

B. 3609

C. 3607



D. 3617



Q26 Arithmetic

$$\frac{5}{9}, \frac{3}{79}, \frac{14}{45}, \frac{34}{79}$$

A. $\frac{34}{79}$

B. $\frac{14}{45}$

C. $\frac{5}{9}$



D. $\frac{3}{79}$

Q27 Arithmetic

A person covers certain distance in 2 hours at a speed of 10 km/h and some more distance in 4 hours at a speed of 6 km/h. Find his average speed for the entire distance covered.

A. $8\frac{1}{3}$

B. $6\frac{1}{3}$

C. $9\frac{1}{3}$

D. $7\frac{1}{3}$

**Q28** Arithmetic

Find the area of polygon ABCDE (in square cm) if $AE = 20$ cm and $AB = 15$ cm; quadrilateral BCDE is a square.

A. 715 cm^2

B. 775 cm^2



C. 755 cm^2

D. 735 cm^2



Q29 Arithmetic

Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 21 m and 115 m.

take $\pi = \frac{22}{7}$

A. 76

B. 62

C. 66



D. 65

Q30 Arithmetic

Find the value of $\left[(30 \div 5) \times \left\{ \frac{30}{6} + \frac{19}{1} \times (4 - 3) \right\} \right]$

A. 132

B. 155

C. 157

D. 144

**Q31** Arithmetic

The difference between the smallest and the largest fractions among

$\frac{5}{9}, \frac{7}{7}, \frac{11}{26}, \frac{14}{16}$ *is:*

A. $\frac{15}{26}$



B. $\frac{15}{25}$

C. $\frac{15}{29}$

D. $\frac{15}{24}$



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Q32 Arithmetic

Study the given table and answer the question that follows.

The table shows the monthly expenditure (in ₹) of five people on education, rent, food, conveyance and electricity.

Person	Education	Rent	Food	Conveyance	Electricity
A	5000	3800	4800	3500	2000
B	6400	4000	4500	4000	2400
C	5500	3600	4000	3600	1800
D	6000	4200	5000	4400	2200
E	7000	4400	5500	4000	2500

Find the difference between the average amount spent on education and the average amount spent on conveyance.

A. ₹1,698

B. ₹1,845

C. ₹2,460

D. ₹2,080

**Q33** Arithmetic

The difference between the smallest and the largest fractions among

$\frac{3}{8}, \frac{5}{9}, \frac{26}{27}, \frac{15}{32}$ *is:*

A. $\frac{127}{213}$

B. $\frac{127}{219}$

C. $\frac{127}{216}$



D. $\frac{127}{214}$

Q34 Arithmetic

$0.\overline{23} + 0.\overline{2} + 4$

A. $4\frac{42}{11}$

B. $4\frac{5}{11}$



C. $4\frac{45}{11}$

D. $4\frac{5}{99}$



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Q35 Arithmetic

Simplify the following:

$$[\{ (-0.4) + (4.6)^2 + (2.3)^2 \} \div 5] - 3.24$$

A. 1.79

B. 1.93

C. 1.39

D. 1.97



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

What time (in seconds) is required for a 549 m long train to cross a 421 m long tunnel, if the train travels at a speed of 36 km/h?

- A. 89
- B. 90
- C. 101
- D. 97



Q2 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2880 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

- A. 1440
- B. 360
- C. 2880
- D. 720



Q3 Arithmetic

The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 249, determine the number of boys participating in the sports.

- A. 1245
- B. 1265
- C. 1220
- D. 1275



Q4 Arithmetic

Nandini and Nandita invest in a business in the ratio 23 : 3. If total profit is Rs. 2522, then what is difference between the profit (in Rs.) of Nandini and Nandita?

- A. 1940
- B. 1840
- C. 1790
- D. 1890



Q5 Arithmetic

If 'a' is the smallest positive integer and the number 8764a529 is completely divisible by 9, then find the value of 17 (3a+5).

- A. 116
- B. 236
- C. 126
- D. 289



Q6 Arithmetic

The average of 41 numbers is 16. The average of the first 17 numbers is 27 and the average of the last 25 numbers is 26. If the 17th number from the beginning is excluded, then what is the average of the remaining numbers?

- A. 5.5
- B. 5.075
- C. 9.085
- D. 3.43



Q7 Arithmetic

A number when increased by 50 %, gives 3630. The number is:

- A. 4840
- B. 7260
- C. 2420
- D. 1210



Q8 Arithmetic

Anmol completes his journey in 16 hours. He covers half the distance at 30 km/h and the rest at 50 km/h. What is the length of the journey (in Km)?

- A. 600
- B. 607
- C. 604
- D. 599



Q9 Arithmetic

The average weight of P, Q and R is 45 kg and that of Q and R is 20 kg. Find the weight of P.

A. 95 kg



B. 92 kg

C. 94 kg

D. 90 kg

Q10 Arithmetic

If the interest earned during the 2nd year on a certain sum is ₹6787, and the rate of interest is 10% per annum compounded annually, then the sum is:

A. ₹62530

B. ₹62005

C. ₹60805

D. ₹61700

**Q11 Arithmetic**

During sale, Raghav bought a notebook marked for ₹60 at 25% discount and a pen marked for ₹80 at 25% discount. How much (in ₹) did he save due to sale?

A. 36

B. 38

C. 35



D. 33

Q12 Arithmetic

If the number 934a6281 is completely divisible by 3 and a be the smallest positive integer, then find the value of $(a-2)(a-1)a(a+1)(a+2)(a+3)(a+4)$.

A. 5004

B. 5040



C. 4050

D. 5400

Q13 Arithmetic

A shopkeeper marks an article at ₹x and offers a discount of 15% on it. He sells it for ₹408 after charging VAT of 25% on the discounted price. What is the value of ₹ x?

A. ₹600

B. ₹384



C. ₹300

D. ₹200

Q14 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 112 km/h and 20 km/h. The faster train passes the slower train in 45 seconds. The length of each train is:

A. 575 meters



B. 563 meters

C. 572 meters

D. 576 meters

Q15 Arithmetic

The smallest natural number which is divisible by 16, 88, 12 and 22 is:

A. 501

B. 528



C. 476

D. 567

Q16 Arithmetic

The average of 41 numbers is 33. The average of the first 17 numbers is 41 and the average of the last 25 numbers is 27. If the 17th number from the beginning is excluded, then what is the average of the remaining numbers?

A. 32.215

B. 30.1

C. 33.35



D. 34.53

Q17 Arithmetic

The expenditure of Sudha is 200% more than her savings. If her expenditure decreases by 4% and savings increase by 28%, then by what percent does her income increase?

A. 0.08

B. 0.07

C. 0.04



D. 0.09

Q18 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 14. The average of the remaining three numbers is

A. 30



B. 29

C. 31

D. 32



Q19 Arithmetic

400 oranges were bought at ₹1410 per hundred and were sold at a profit of ₹960. Find the selling price (in ₹) per dozen of oranges.

A. 188

B. 208

C. 198



D. 213

Q20 Arithmetic

A shopkeeper lists the price of a fan at 20% above its cost price and offers a 15% discount on its list price. If he earns a profit of ₹190, then what is the list price (in ₹) of the fan?

A. 11243

B. 11549

C. 11400



D. 11528

Q21 Arithmetic

The average price of three items of furniture is Rs 15855. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 22197



B. 5285

C. 7399

D. 3171

Q22 Arithmetic

A cone is 12.6 cm high and the radius of the base is 3.2 cm. It is melted and recast into a sphere. Determine the radius of the sphere. (Correct up to one decimal place)

A. 1.2 cm

B. 2.1 cm

C. 2.9 cm

D. 3.2 cm

**Q26 Arithmetic**

Find the value of
$$\left[(23 \times 7) \times \left\{ 6 \div 6 \times \frac{(17 - 13)}{4} \right\} \right]$$

A. 143

B. 161



C. 158

D. 175

Q23 Arithmetic

A bank offers 8.1% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹8445 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹1048.4

B. ₹1069.91

C. ₹1039.91



D. ₹1057.26

Q24 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 318833 so that it is completely divisible by 11 is:

A. 5

B. 2



C. 7

D. 3

Q25 Arithmetic

If a 1952 m long train crosses a pole in 122 seconds, then find the time (in seconds) taken by the train to cross a 160 m long platform.

A. 128

B. 137

C. 135

D. 132



Q27 Arithmetic

If $26 \times 5 \times 882 \div \sqrt{2401} = y + 695$, then find the value of y.

A. 1651

B. 1655

C. 1652

D. 1645 ☒**Q28** Arithmetic

Two right circular cones have heights in the ratio 1 : 9 and their base perimeters are in the ratio 9 : 5. Determine their volume ratio.

(Use $\pi = \frac{22}{7}$)

A. 25 : 9

B. 7 : 25

C. 25 : 7

D. 9 : 25 ☒**Q29** Arithmetic

$\frac{4}{7}$, $\frac{4}{45}$, $\frac{65}{87}$, $\frac{12}{38}$

A. $\frac{65}{87}$ ☒B. $\frac{4}{45}$ C. $\frac{12}{38}$ D. $\frac{4}{7}$ 

Q30 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 6 when $y = 3$, find x when $y = 7$.

A. $\frac{28}{57}$

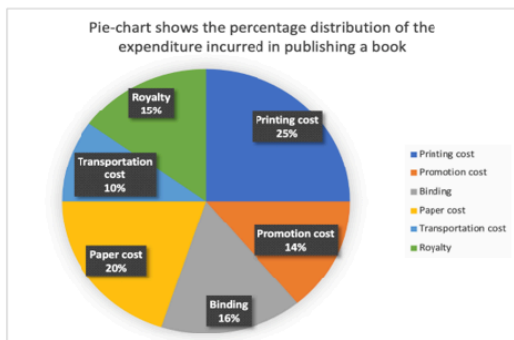
B. $\frac{26}{58}$

C. $\frac{26}{57}$ ✓

D. $\frac{27}{58}$

Q31 Arithmetic

The following pie chart shows the percentage distribution of the expenditure incurred in publishing a book.



If, for a certain quantity of books, the publisher pays ₹20,400 as paper cost, then what is the difference between printing cost and royalty (in ₹) for these books?

A. 13600

B. 10200 ✓

C. 12400

D. 11600



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Q32 Arithmetic

$$\frac{1}{7} + \frac{5}{7} + \frac{2}{14} + \frac{4}{7} - 2 =$$

A. $-\frac{3}{14}$

B. $-\frac{5}{14}$

C. $-\frac{8}{14}$

D. $-\frac{6}{14}$ ✓

Q33 Arithmetic

Take $\pi = \frac{22}{7}$

A. $\sqrt{\frac{535}{33}}$

B. $\sqrt{\frac{541}{66}}$

C. $\sqrt{\frac{541}{33}}$

D. $\sqrt{\frac{532}{33}}$ ✓

Q34 Arithmetic

If $24 \times 9 \times 720 \div \sqrt{2304} = y + 925$, then find the value of y.

A. 2307

B. 2316

C. 2310

D. 2315 ✓



Q35 Arithmetic

$$0.\overline{23} + 0.\overline{54} + 0.\overline{3}$$

A. $\frac{10}{99}$

B. $\frac{11}{9}$

C. $\frac{10}{9}$



D. $\frac{11}{99}$



Arithmetic

35 Questions · Answer Key

Q1 Arithmetic

Given that $59^{0.46} = x$, $59^{0.21} = y$ and $x^z = y^5$, then the value of z is close to:

A. 4.55

B. 4.83

C. 2.28



D. 0.17

Q2 Arithmetic

The marked price of an article is ₹492. The shopkeeper offers a discount of 39% on the purchase of the article. Thereby, he makes a profit of 22%. The cost price of the article is:

A. ₹220

B. ₹247

C. ₹259

D. ₹246



Q3 Arithmetic

Which of the following ratio is smallest?

A. 29 : 31

B. 21 : 52



C. 28 : 42

D. 24 : 59

Q4 Arithmetic

A bank offers 9.4% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹8716 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹1256.82

B. ₹1228.2

C. ₹1238.89

D. ₹1248.2



Q5 Arithmetic

If the volume of cube is 4096 m^3 , then find the total surface area of cube in m^2 .

A. 1536



B. 1514

C. 1558

D. 1548

Q6 Arithmetic

The expenditure of Sudha is 200% more than her savings. If her expenditure decreases by 6% and savings increase by 26%, then by what percent does her income increase?

A. 0.07

B. 0.02



C. 0.05

D. 0.06

Q7 Arithmetic

Find the value of $50^{-3} \div 50^{15} \times 50^{-18}$

A. $1. 50^{-37}$ B. $2. 50^{-27}$ C. $3. 50^{-30}$ D. $4. 50^{-36}$ 

Q8 Arithmetic

During sale, Raghav bought a notebook marked for ₹28 at 25% discount and a pen marked for ₹75 at 16% discount. How much (in ₹) did he save due to sale?

A. 19



B. 21

C. 18

D. 17



Q9 Arithmetic

A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 652 grams for 1000 grams. What is his profit percentage (rounded off to 2 decimal places)?

A. 53.46

B. 53.37



C. 56.69

D. 51.75

Q10 Arithmetic

Find the surface area of a sphere whose diameter is equal to 92 cm.

A. 1. 9073 cm²

B. 2. 8074 cm²

C. 3. 9329 cm²

D. 4. 8464 cm²

**Q11 Arithmetic**

Find the simple interest (in ₹) on ₹2000 at 6.25% per annum rate of interest for the period from 11 February 2023 to 25 April 2023

A. 26

B. 25



C. 24

D. 23

Q12 Arithmetic

Find the value of $30^{-5} \div 30^{17} \times 30^{-16}$

A. 1. 30^{-38}



B. 2. 30^{-46}

C. 3. 30^{-44}

D. 4. 30^{-48}

Q13 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 76 km/h and 67 km/h. The faster train passes the slower train in 56 seconds. The length of each train is:

A. 80 meters

B. 74 meters

C. 79 meters

D. 70 meters

**Q14 Arithmetic**

The average of 7 numbers is 43. If each number is decreased by 7, what will the new average be?

A. 7

B. 29

C. 43

D. 36

**Q15 Arithmetic**

Isha and Anshu together invested ₹49700 in a business. At the end of the year, out of a total profit of ₹8800, Isha's share was ₹2200. What was the investment of Anshu?

A. ₹37275



B. ₹37025

C. ₹36760

D. ₹37400

Q16 Arithmetic

What will be the remainder when 111^{2024} is divided by 112?

A. 4

B. 1



C. 2

D. 3

Q17 Arithmetic

The smallest natural number which is divisible by 12, 8, 75 and 15 is:

A. 610

B. 562

C. 690

D. 600

**Q18 Arithmetic**

Ravi has 1458 litres of a mixture of milk and water. The ratio of milk to water in this mixture is 8 : 1. How much water (in litres) should Ravi add into the mixture so that the ratio of milk and water becomes 6 : 5?

A. 900

B. 909

C. 918



D. 927



Q19 Arithmetic

The average of eight numbers is 19. The average of five of these numbers is 20. The average of the remaining three numbers is

- A. 18.33
- B. 17.33
- C. 16.33
- D. 19.33

Q20 Arithmetic

Raghu scored 34, 43, 21, and 28 marks in four consecutive slip tests conducted in his school. How much should he score in the fifth slip test in order to have an average score of 30 marks?

- A. 22
- B. 20
- C. 14
- D. 24

Q21 Arithmetic

Find the least value of 'x' so that the 8-digit number $85264x16$ is divisible by 8.

- A. 1
- B. 3
- C. 2
- D. 5

Q22 Arithmetic

The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 245, determine the number of boys participating in the sports.

- A. 1200
- B. 1255
- C. 1225
- D. 1245

Q23 Arithmetic

A 185 m long train crosses a man walking at a speed of 9.9 km/h in the opposite direction in 6 seconds. What is the speed (in km/h) of the train?

- A. 106.2
- B. 97.6
- C. 101.09
- D. 104.2

Q24 Arithmetic

A number when increased by 50 %, gives 3960. The number is:

- A. 2640
- B. 5280
- C. 7920
- D. 1320

Q25 Arithmetic

My kid brother is playing with a kite whose area is 15 sq cm and the sum of its diagonals is 11 cm. Find its diagonals in centimetres.

- A. 6, 5
- B. 7, 4
- C. 5.25, 5.75
- D. 5.5, 5.5

Q26 Arithmetic

Anmol completes his journey in 16 hours. He covers half the distance at 72 km/h and the rest at 56 km/h. What is the length of the journey (in Km)?

- A. 1013
- B. 1008
- C. 1000
- D. 999

Q27 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 101 km/h and 71 km/h. The faster train passes the slower train in 18 seconds. The length of each train is:

- A. 88 meters
- B. 72 meters
- C. 83 meters
- D. 75 meters

Q28 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 874146 so that it is completely divisible by 11 is:

- A. 2
- B. 5
- C. 1
- D. 3



Q29 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 806039 so that it is completely divisible by 11 is:

- A. 3
- B. 4
- C. 8
- D. 6

**Q30 Arithmetic**

Nidhi invested a sum of ₹9600 at 15% per annum compound interest, compounded annually. If she received an amount of ₹12696 after n years, the value of n is:

- A. 1
- B. 3
- C. 2
- D. 2.5

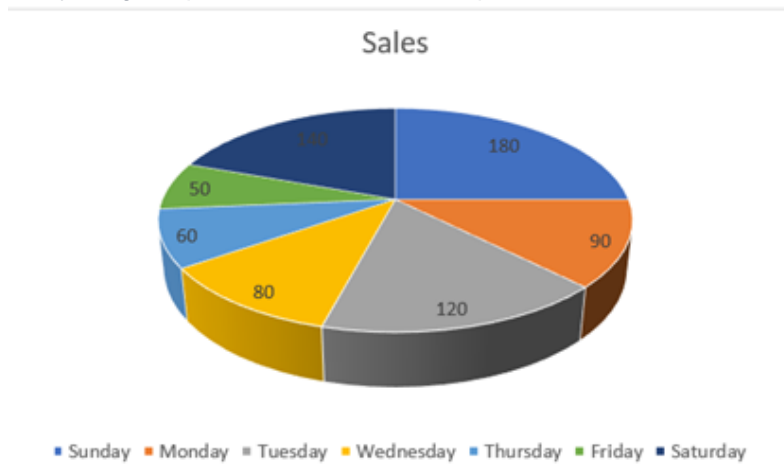
**Q31 Arithmetic**

How much sugar at ₹14.5 a kg should be added to 22 kg of tea at ₹25 a kg, so that the mixture be worth ₹18 a kg?

- A. 42 kg
- B. 44 kg
- C. 46 kg
- D. 40 kg

**Q32 Arithmetic**

The pie-chart shows the sales of an item on different days of a week. Study the given pie-chart and answer the question that follows.



The angle made at the centre by the sales on Wednesday is (in degrees):

- A. 40
- B. 50
- C. 30
- D. 60



Q33 Arithmetic

The selling price of 50 books is equal to the cost price of 21 books. Find the loss or gain percentage.

A. $\frac{100}{29}\%$ gain

B. 58 % loss



C. $\frac{100}{29}\%$ loss

D. 58 % gain

Q34 Arithmetic

If $19 \times 8 \times 940 \div \sqrt{2209} = y + 557$, then find the value of y.

A. 2481

B. 2488

C. 2479

D. 2483

**Q35** Arithmetic

$$\frac{2}{8} + \frac{3}{8} + \frac{3}{16} + \frac{4}{8} - 4 =$$

A. $-\frac{44}{16}$

B. $-\frac{43}{16}$



C. $-\frac{50}{16}$

D. $-\frac{33}{16}$



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

The areas of three adjacent faces of a solid cuboid are 127 cm^2 , 32 cm^2 and 254 cm^2 . What is the volume (in cm^3) of the cuboid?

A. 963

B. 1163

C. 1016



D. 941

Q2 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2160 after 4 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

A. 240

B. 1920

C. 960

D. 480



Q3 Arithmetic

Four years ago, the average age of P, Q and R was 25 years. If three years ago, the average age of P and Q was 20 years, find the present age of R.

A. 38 years

B. 41 years



C. 35 years

D. 34 years

Q4 Arithmetic

Latika and Himani together invested ₹47800 in a business. At the end of the year, out of a total profit of ₹7500, Latika's share was ₹2700. What was the investment of Himani?

A. ₹30592



B. ₹28855

C. ₹32405

D. ₹31305

Q5 Arithmetic

LCM and HCF of two numbers are 192 and 32 respectively. If one of the numbers is 64, then find the other number.

A. 99

B. 93

C. 96



D. 97

Q6 Arithmetic

If 25% of a number is added to 72, then the result is the same number. 60% of the same number is:

A. 77.6

B. 57.6



C. 27.6

D. 87.6

Q7 Arithmetic

The average price of three items of furniture is Rs 16020. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 3204

B. 22428



C. 7476

D. 5340

Q8 Arithmetic

A train runs at a speed of 148 kmph to cover a distance of 296 km and then at a speed of 98 kmph to cover a distance of 294 km. Find the average speed of the train for the entire distance.

A. 118 kmph



B. 131 kmph

C. 114 kmph

D. 132 kmph



Q9 Arithmetic

If at same rate of interest, in 2 years, the simple interest is ₹60 and compound interest is ₹64, then what is the principal (in ₹)?

- A. 220
- B. 229
- C. 218
- D. 225

**Q10 Arithmetic**

A train runs at a speed of 137 kmph to cover a distance of 411 km and then at a speed of 109 kmph to cover a distance of 327 km. Find the average speed of the train for the entire distance.

- A. 123 kmph
- B. 115 kmph
- C. 125 kmph
- D. 87 kmph

**Q11 Arithmetic**

Find the least of value of 'x' so that the number 9052743×2 is divisible by 8.

- A. 8
- B. 3
- C. 9
- D. 7

**Q12 Arithmetic**

The smallest natural number which is divisible by 15, 63, 21 and 70 is:

- A. 531
- B. 632
- C. 630
- D. 587

**Q13 Arithmetic**

During sale, Raghav bought a notebook marked for ₹50 at 40% discount and a pen marked for ₹32 at 50% discount. How much (in ₹) did he save due to sale?

- A. 38
- B. 39
- C. 33
- D. 36

**Q14 Arithmetic**

Three partners invested in a business in the ratio 3:9:8. They invested their capitals for 10 months, 1 months and 4 months, respectively. What was the ratio of their profits?

- A. 31:9:32
- B. 28:9:32
- C. 30:9:32
- D. 32:9:32

**Q15 Arithmetic**

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 9 hours 30 minutes. He would have gained 7 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 16 hours 45 minutes
- B. 17 hours 30 minutes
- C. 15 hours 15 minutes
- D. 16 hours 15 minutes

**Q16 Arithmetic**

A bank offers 6.6% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹4823 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

- A. ₹482.72
- B. ₹479.07
- C. ₹462.72
- D. ₹474.94

**Q17 Arithmetic**

The average of 7 numbers is 45. If each number is decreased by 5, what will the new average be?

- A. 45
- B. 40
- C. 35
- D. 7



Q18 Arithmetic

Evaluate 85^2

A. 7245

B. 7225



C. 7235

D. 7195

Q19 Arithmetic

The area of a square plot is 841 m^2 . The length of each side of the plot (in m) is:

A. 31

B. 29



C. 41

D. 39

Q20 Arithmetic

If third proportional of 36 and 18 be x, then what is the value of x?

A. 11

B. 10

C. 9



D. 7

Q21 Arithmetic

David sold 172 chairs and had a gain equal to the selling price of 86 chairs. What is his profit percentage?

A. 110%

B. 105%

C. 100%



D. 95%

Q22 Arithmetic

A train runs at a speed of 81 kmph to cover a distance of 405 km and then at a speed of 88 kmph to cover a distance of 176 km. Find the average speed of the train for the entire distance.

A. 83 kmph



B. 129 kmph

C. 53 kmph

D. 133 kmph

Q23 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹38360. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹55065, then what will be Lalit's average earning (in ₹) per month from May to December?

A. 61018

B. 61020



C. 61025

D. 61015

Q24 Arithmetic

LCM and HCF of two numbers are 150 and 5 respectively. If one of the numbers is 15, then find the other number.

A. 52

B. 48

C. 49

D. 50

**Q25 Arithmetic**

A shopkeeper marks an article at ₹x and offers a discount of 60% on it. He sells it for ₹444 after charging VAT of 25% on the discounted price. What is the value of ₹x?

A. ₹1100

B. ₹700

C. ₹900

D. ₹888

**Q26 Arithmetic**

A number when increased by 50 %, gives 3870. The number is:

A. 5160

B. 7740

C. 2580



D. 1290



Q27 Arithmetic

By selling an article at $\frac{2}{5}$ of its actual selling price, Ramesh incurs a loss of 16%. If he sells it at 73% of its actual selling price, then the profit percentage is:

A. 53.3%



B. 52.7%

C. 54.7%

D. 52.1%

Q28 Arithmetic

How much water should be mixed in 40 litres of milk worth ₹6.90 per litre, so that the value of the mixture is ₹4.60 per litre?

A. 25 litres

B. 20 litres



C. 10 litres

D. 15 litres

Q29 Arithmetic

$$\frac{5}{5} + \frac{5}{5} + \frac{4}{10} + \frac{1}{5} - 2 =$$

A. $-\frac{1}{10}$

B. $\frac{3}{10}$

C. $\frac{6}{10}$



D. $\frac{1}{10}$

Q30 Arithmetic

Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 56 m and 154 m.

$$\text{take } \pi = \frac{22}{7}$$

A. 171

B. 173

C. 176



D. 174



Q31 Arithmetic

$$0.\overline{42} + 0.\overline{42}$$

A. $\frac{834}{999}$

B. $\frac{838}{990}$ ✓

C. $\frac{838}{999}$

D. $\frac{834}{990}$

Q32 Arithmetic

$$0.\overline{641} + 0.\overline{23}$$

A. $\frac{173}{999}$

B. $\frac{173}{199}$

C. $\frac{173}{198}$ ✓

D. $\frac{173}{99}$

Q33 Arithmetic

Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 250 m and 126 m.

$$\text{take } \pi = \frac{22}{7}$$

A. 391

B. 393

C. 395

D. 396 ✓

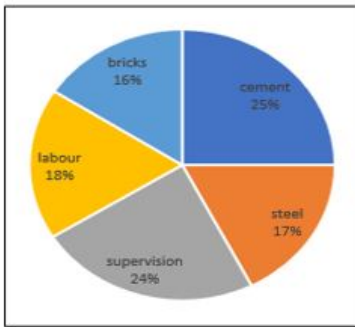


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Q34 Arithmetic

The given pie chart shows the breakup of the cost of construction of an office.



If the total cost of construction is ₹9,00,000, by how much does the amount spent on cement exceed the amount spent on labour?

A. ₹63,000



B. ₹55,000

C. ₹45,000

D. ₹54,000

Q35 Arithmetic

If $x = 2 + \sqrt{9}$ and $y = 2 - \sqrt{9}$ then the value of $x^2 + y^2$ is:

A. 22

B. 9

C. 15

D. 26



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

A sum, when invested at 10% simple interest per annum, amounts to ₹9360 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 1 year?

A. 1440

B. 720



C. 360

D. 2880

Q2 Arithmetic

A bank offers 2.6% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹8565 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹325.48

B. ₹343.66

C. ₹323.72

D. ₹335.48



Q3 Arithmetic

A bank offers 3.8% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹2710 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹155.44



B. ₹175.44

C. ₹174.88

D. ₹170.5

Q4 Arithmetic

What time (in seconds) is required for a 188 m long train to cross a 472 m long tunnel, if the train travels at a speed of 27 km/h?

A. 98

B. 79

C. 88



D. 80

Q5 Arithmetic

Ruchi and Sheetal invest in a business in the ratio 9 : 6. If total profit is Rs. 2775, then what is difference between the profit (in Rs.) of Ruchi and Sheetal?

A. 605

B. 555



C. 705

D. 405

Q6 Arithmetic

A number when increased by 50 %, gives 3780. The number is:

A. 5040

B. 7560

C. 2520



D. 1260

Q7 Arithmetic

During sale, Raghav bought a notebook marked for ₹100 at 86% discount and a pen marked for ₹95 at 40% discount. How much (in ₹) did he save due to sale?

A. 123

B. 121

C. 126

D. 124



Q8 Arithmetic

The sides of a triangle are 60 cm, 75 cm, and 45 cm. What is its area? (in cm^2)

A. 1307

B. 1390

C. 1385

D. 1350



Q9 Arithmetic

The area of a square plot is 29929 m^2 . The length of each side of the plot (in m) is:

A. 197

B. 173



C. 163

D. 177

Q10 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 18. The average of the remaining three numbers is

A. 22.33

B. 24.33

C. 25.33

D. 23.33

**Q11 Arithmetic**

The smallest natural number which is divisible by 13, 6, 24 and 39 is:

A. 359

B. 312



C. 340

D. 243

Q12 Arithmetic

The expenditure of Sudha is 100% more than her savings. If her expenditure decreases by 2% and savings increase by 10%, then by what percent does her income increase?

A. 0.05

B. 0.02



C. 0.01

D. 0.06

Q13 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 777288 so that it is completely divisible by 11 is:

A. 7

B. 5



C. 9

D. 1

Q14 Arithmetic

Chandu covers 245 km in a boat in 30 hours against the stream and he takes 21 hours with the stream then find the speed of the stream?

A. 5.75 km/h

B. 7.18 km/h

C. 10.88 km/h

D. 1.75 km/h

**Q15 Arithmetic**

The smallest 1-digit number to be added to the 6-digit number 489483 so that it is completely divisible by 11 is:

A. 5

B. 4

C. 3

D. 6

**Q16 Arithmetic**

12 chefs can make 96 dishes in 4 hours. Find the average dishes that can be made by each chef in an hour.

A. 8

B. 6

C. 2



D. 4

Q17 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 7 hours 15 minutes. He would have gained 6 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

A. 13 hours 45 minutes

B. 14 hours 30 minutes

C. 12 hours 15 minutes

D. 13 hours 15 minutes

**Q18 Arithmetic**

The smallest natural number which is divisible by 40, 16, 8 and 24 is:

A. 332

B. 270

C. 226

D. 240



Q19 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹4184. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹17553, then what will be Lalit's average earning (in ₹) per month from May to December?

A. 23978

B. 23979

C. 23976



D. 23973

Q20 Arithmetic

The average of 7 numbers is 55. If each number is increased by 6, what will the new average be?

A. 7

B. 55

C. 67

D. 61

**Q21 Arithmetic**

Find the surface area of a sphere whose diameter is equal to 8 cm.

A. 1.87 cm²

B. 2.786 cm²

C. 3.64 cm²



D. 4.543 cm²

Q22 Arithmetic

Shweta and Monika invest in a business in the ratio 2 : 1. If total profit is Rs. 1347, then what is difference between the profit (in Rs.) of Shweta and Monika?

A. 449



B. 399

C. 599

D. 549

Q23 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 97 km/h and 21 km/h. The faster train passes the slower train in 45 seconds. The length of each train is:

A. 475 meters



B. 472 meters

C. 466 meters

D. 477 meters

Q24 Arithmetic

If $\frac{p}{q} = \frac{19}{5} + \frac{2}{7} - 2.4 + \left(\frac{4.8}{2.4}\right)^2$, where p/q is a simplest form, then find the sum of the digits of q .

A. 6

B. 5

C. 7

D. 8



Q25 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 6 when $y = 3$, find x when $y = 9$.

A. $\frac{3}{14}$



B. $\frac{4}{15}$

C. $\frac{5}{14}$

D. $\frac{3}{15}$

Q26 Arithmetic

Find the value of $\left[(29 \times 8) \times \left\{ 2 \div 2 \times \frac{(18 - 11)}{7} \right\} \right]$

A. 234

B. 233

C. 228

D. 232

**Q27** Arithmetic

A trader gives 5% discount on the marked price of an article and gives 4 articles free for buying 14 articles and gains 33% in the entire transaction. Assuming a customer pays for 14 articles, the marked price of an article is what per cent more than its cost price?

A. 90%

B. 80%



C. 81%

D. 79%



Q28 Arithmetic

$$\frac{4}{6}, \frac{7}{79}, \frac{19}{54}, \frac{54}{84}$$

A. $\frac{19}{54}$

B. $\frac{7}{79}$

C. $\frac{4}{6}$



D. $\frac{54}{84}$

Q29 Arithmetic

To create a mixture that costs ₹110 per kg, 30 kg of one type of rice is combined with 60 kg of another type of rice that costs ₹100 per kg, find out how much the more expensive rice costs per kilogram.

A. ₹125 per kg

B. ₹135 per kg

C. ₹120 per kg

D. ₹130 per kg



Q30 Arithmetic

$$\frac{(a^9 \times b^9 \times c^3)}{(a^7 \times b^5 \times c^2)} \text{ in simplified form is:}$$

A. $(a^{10}) \times (b^5) \times (c^{-1})$

B. $(a^9) \times (b^2) \times (c^9)$

C. $(a^{10}) \times (b^{-2}) \times (c^{-2})$

D. $(a^2) \times (b^4) \times (c^1)$



Q31 Arithmetic

The selling price of 32 books is equal to the cost price of 24 books. Find the loss or gain percentage.

A. $\frac{100}{8} \% \text{ loss}$

B. 25 % loss

C. 25 % gain

D. $\frac{100}{8} \% \text{ gain}$



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Q32 Arithmetic

Study the given table and answer the question that follows.

The table shows the monthly expenditure (in ₹) of five people on education, rent, food, conveyance and electricity.

Person	Education	Rent	Food	Conveyance	Electricity
Praveen	5,000	3,800	4,800	3,500	2,000
Rohan	6,400	4,000	4,500	4,000	2,400
Reena	5,500	3,600	4,000	3,600	1,800
Seema	6,000	4,200	5,000	4,400	2,200
Teena	7,000	4,400	5,500	4,000	2,500

Find the ratio of the amount spent by Rohan and Teena on food and education to the amount spent by Praveen and Seema on rent and conveyance.

A. 81 : 68

B. 45 : 34

C. 38 : 29

D. 78 : 53

**Q33 Arithmetic**

Simplify the following:

$$\{(-1.5) \times (-8.2) - 3.3\}(4.2)^2$$

A. 158

B. 155.76

C. 155

D. 158.76

**Q34 Arithmetic**

My little sister is filling a conical bag with gems. She knows that the capacity of each bag is 75.36 cubic inches. Find the slant height of the cone, upto three decimal places, if the diameter is 6 inches. (Take $\pi = 3.14$)

A. 8.454 inches

B. 8.455 inches

C. 8.544 inches

D. 8.545 inches

**Q35 Arithmetic**

Find the gain percentage, given that Aditi sold her scooter for ₹82008 gaining $\frac{1}{6}$ th of the selling price.

A. 30%

B. 10%

C. 35%

D. 20%



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹3120 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 1 year?

A. 195

B. 1560

C. 390



D. 780

Q2 Arithmetic

If the average of three consecutive numbers is 42, find the second smallest of these numbers.

A. 44

B. 42



C. 41

D. 43

Q3 Arithmetic

The smallest natural number which is divisible by 18, 5, 81 and 90 is:

A. 751

B. 810



C. 720

D. 797

Q4 Arithmetic

The average of 7 numbers is 57. If each number is increased by 6, what will the new average be?

A. 7

B. 63



C. 69

D. 57

Q5 Arithmetic

Amit sold 171 chairs and had a gain equal to the selling price of 71 chairs. What is his profit percentage?

A. 81%

B. 66%

C. 76%

D. 71%



Q6 Arithmetic

A shopkeeper sells an item for ₹960.4 after giving two successive discounts of 30% and 80% on its marked price. Had he not given any discount, he would have earned a profit of 40%. What is the cost price (in ₹) of the item?

A. 4900



B. 4931

C. 4920

D. 4908

Q7 Arithmetic

A milk vendor has 40 litres of a 40% milk solution. How many litres of pure water should be added so that the resulting mixture is a 25% milk solution?

A. 20

B. 24



C. 25

D. 23

Q8 Arithmetic

A train runs at a speed of 92 kmph to cover a distance of 184 km and then at a speed of 102 kmph to cover a distance of 204 km. Find the average speed of the train for the entire distance.

A. 134 kmph

B. 92 kmph

C. 97 kmph



D. 98 kmph

Q9 Arithmetic

Yamini and Zareen together invested ₹37200 in a business. At the end of the year, out of a total profit of ₹5000, Yamini's share was ₹1300. What was the investment of Zareen?

A. ₹26605

B. ₹27528



C. ₹28830

D. ₹26470



Q10 Arithmetic

LCM and HCF of two numbers are 162 and 27 respectively. If one of the numbers is 54, then find the other number.

A. 82

B. 81



C. 80

D. 78

Q11 Arithmetic

The population of a village was 130000. It increased by 15% in the first year and increased by 30% in the second year. Its population after two years is _____.

A. 188500

B. 149500

C. 194350



D. 169000

Q12 Arithmetic

The cost of painting a rectangular sheet at the rate of ₹1.5 per square cm is ₹945. If the length of the rectangular sheet is 30 cm, then what is its breadth (in cm)?

A. 20

B. 19

C. 21



D. 22

Q13 Arithmetic

If at same rate of interest, in 2 years, the simple interest is ₹60 and compound interest is ₹62, then what is the principal (in ₹)?

A. 443

B. 454

C. 445

D. 450

**Q14 Arithmetic**

A train runs at a speed of 114 kmph to cover a distance of 228 km and then at a speed of 93 kmph to cover a distance of 372 km. Find the average speed of the train for the entire distance.

A. 60 kmph

B. 113 kmph

C. 100 kmph



D. 125 kmph

Q15 Arithmetic

Evaluate 124^2

A. 15356

B. 15406

C. 15366

D. 15376

**Q16 Arithmetic**

During sale, Raghav bought a notebook marked for ₹35 at 20% discount and a pen marked for ₹100 at 79% discount. How much (in ₹) did he save due to sale?

A. 83

B. 89

C. 86



D. 85

Q17 Arithmetic

The smallest natural number which is divisible by 33, 6, 8 and 16 is:

A. 502

B. 528



C. 500

D. 550

Q18 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 8 hours 45 minutes. He would have gained 5 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

A. 14 hours 15 minutes

B. 12 hours 45 minutes

C. 13 hours 45 minutes



D. 13 hours 30 minutes

Q19 Arithmetic

A number when divided by 798 leaves 45 as remainder. If the same number is divided by 21, what will be the remainder?

A. 2

B. 5

C. 3



D. 4



Q20 Arithmetic

Vaishali and Vanya invest in a business in the ratio 35 : 8. If total profit is Rs. 3655, then what is difference between the profit (in Rs.) of Vaishali and Vanya?

A. 2295



B. 2345

C. 2395

D. 2195

Q21 Arithmetic

Three partners invested in a business in the ratio 7:2:5. They invested their capitals for 11 months, 7 months and 12 months, respectively. What was the ratio of their profits?

A. 79:14:60

B. 77:14:60



C. 78:14:60

D. 76:14:60

Q22 Arithmetic

The average of 7 numbers is 45. If each number is decreased by 4, what will the new average be?

A. 41



B. 37

C. 45

D. 7

Q23 Arithmetic

A vendor claims to sell wheat at a loss of 25%. But he cheats by using weights that weigh 35% less than what is mentioned on them. What is his profit percentage (rounded off to 2 decimal places)?

A. 19.85

B. 20.31

C. 15.38



D. 14.41

Q24 Arithmetic

Bhanu covers 790 km in a boat in 30 hours against the stream and he takes 12 hours with the stream then find the speed of the stream?

A. 28.05 km/h

B. 19.75 km/h



C. 23.95 km/h

D. 15.59 km/h

Q25 Arithmetic

Given that $137^{0.42} = x$, $137^{0.62} = y$ and $x^z = y^2$, then the value of z is close to:

A. 2.95



B. 4.66

C. 2.8

D. 4.37

Q26 Arithmetic

If at same rate of interest, in 2 years, the simple interest is ₹60 and compound interest is ₹63, then what is the principal (in ₹)?

A. 300



B. 293

C. 295

D. 304

Q27 Arithmetic

Given that $26^{0.89} = x$, $26^{0.31} = y$ and $x^z = y^2$, then the value of z is close to:

A. 1.33

B. 2.47

C. -0.41

D. 0.7



Q28 Arithmetic

$$\frac{5}{9} + \frac{1}{9} + \frac{3}{18} + \frac{3}{9} - 1 =$$

A. $\frac{1}{18}$

B. $\frac{3}{18}$ ✓

C. $\frac{9}{18}$

D. $-\frac{7}{18}$

Q29 Arithmetic

$$0.04\overline{3} + 2$$

A. $2\frac{17}{900}$

B. $2\frac{17}{300}$

C. $2\frac{13}{900}$

D. $2\frac{13}{300}$ ✓

Q30 Arithmetic

The volume of a conical tent is 9240 m^3 and the area of its base is 1386 m^2 .

What is the length of the canvas required to build the tent if the width of canvas is 3 m?

(Use $\pi = \frac{22}{7}$)

A. 638 m ✓

B. 432 m

C. 687 m

D. 568 m



Q31 Arithmetic

The price (per litre) of petrol increases by 60%. By what percent should its consumption be reduced such that the expenditure on it increases by 28% only?

A. 80%



B. 73%

C. 74%

D. 79%

Q32 Arithmetic

A can contains a mixture of two liquids P and Q in the ratio 8 : 7. When 5 Litre of the mixture are drawn off and the can is filled with Q, the ratio of P and Q becomes 2 : 3. How many litres of liquid P was contained by the can initially?

A. $\frac{35}{3}$ L

B. $\frac{25}{3}$ L

C. $\frac{32}{3}$ L



D. $\frac{28}{3}$ L

Q33 Arithmetic

If $x = 3 + \sqrt{6}$ and $y = 3 - \sqrt{6}$ then the value of $x^2 + y^2$ is:

A. 36

B. 25

C. 70

D. 30



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Q34 Arithmetic

Study the given table and answer the question that follows.

The given table shows data regarding bats produced by different companies. The companies produce plastic and wooden bats.

Information about plastic bats is given as the percentage of the total number of bats produced,

and that of wooden bats is given as the ratio of the number of bats of brand X to that of brand Y.

Each company produces a total of 25,000 bats.

Name of the company	Plastic bats (%)	Wooden bats X : Y
A	55.	21 : 4
B	70.	8 : 7
C	45.	6 : 19
D	75.	41 : 14
E	60.	7 : 15
F	40.	5 : 6

What is the ratio of wooden bats of brand Y manufactured by company C to the total number of wooden bats manufactured by companies A and F?

A. 209 : 525



B. 125 : 872

C. 870 : 433

D. 430 : 613

Q35 Arithmetic

A sphere of radius 3 cm is put into water contained in a cylinder with a base radius of 12 cm. If the sphere is completely immersed in the water, the water level in the cylinder rises by:

A. $\frac{1}{4}$ cm



B. 3 cm

C. $\frac{1}{3}$ cm

D. 4 cm



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

A wholesaler purchases goods worth ₹45,000. The manufacturer offers a trade discount of 15% and an additional scheme discount of 10%. Calculate the net price after both discounts.

- A. ₹34,255
- B. ₹34,225
- C. ₹34,455
- D. ₹34,425



Q2 Arithmetic

The LCM of 24, 38, 336 and 152 is:

- A. 6353
- B. 6362
- C. 6410
- D. 6384



Q3 Arithmetic

The population of a village was 130000. It increased by 10% in the first year and increased by 20% in the second year. Its population after two years is _____.

- A. 143000
- B. 169000
- C. 171600
- D. 156000



Q4 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2880 after 4 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

- A. 320
- B. 2560
- C. 640
- D. 1280



Q5 Arithmetic

Manav's average earning per month in the first three months of a year was ₹7520. In April, his earning was 75% more than the average earning in the first three months. If his average earning per month for the whole year is ₹62334, then what will be Manav's average earning (in ₹) per month from May to December?

- A. 89031
- B. 89034
- C. 89036
- D. 89039



Q6 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 950473 so that it is completely divisible by 11 is:

- A. 1
- B. 4
- C. 2
- D. 6



Q7 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 66 km/h and 39 km/h. The faster train passes the slower train in 24 seconds. The length of each train is:

- A. 89 meters
- B. 90 meters
- C. 110 meters
- D. 72 meters



Q8 Arithmetic

The average of 7 numbers is 53. If each number is increased by 7, what will the new average be?

- A. 67
- B. 7
- C. 60
- D. 53



Q9 Arithmetic

Given that $42^{0.66} = x$, $42^{0.65} = y$ and $x^z = y^4$, then the value of z is close to:

A. 2.04

B. 4.92

C. 3.94



D. 4.81

Q10 Arithmetic

Three partners invested in a business in the ratio 6:7:3. They invested their capitals for 8 months, 3 months and 10 months, respectively. What was the ratio of their profits?

A. 14:7:10

B. 16:7:10



C. 17:7:10

D. 13:7:10

Q11 Arithmetic

The price of fuel decreases by 20%, 45% and 55% in three successive months, but increases by 50% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price?

A. Decreases by 68.29%

B. Increases by 67.55%

C. Increases by 72.35%

D. Decreases by 70.3%

**Q12 Arithmetic**

The average of 7 numbers is 51. If each number is increased by 6, what will the new average be?

A. 51

B. 7

C. 63

D. 57

**Q13 Arithmetic**

Given that $17^{0.63} = x$, $17^{0.04} = y$ and $x^z = y^4$, then the value of z is close to:

A. -0.45

B. -0.79

C. 2.08

D. 0.25

**Q14 Arithmetic**

The average weight of 6 men is increased by 2 kg when one of them whose weight is 48 kg is replaced by a new man. What is the weight of the new man?

A. 60 kg



B. 58 kg

C. 56 kg

D. 54 kg

Q15 Arithmetic

Pranjal's average earning per month in the first three months of a year was ₹28744. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹94411, then what will be Pranjal's average earning (in ₹) per month from May to December?

A. 125447

B. 125453

C. 125448



D. 125446

Q16 Arithmetic

If the volume of cube is 1728 m^3 , then find the total surface area of cube in m^2 .

A. 901

B. 910

C. 861

D. 864

**Q17 Arithmetic**

A man sold an article for ₹420 by first giving a $d\%$ discount on its marked price, and then another discount having the same nominal value (in %). If the marked price of the article is ₹560, then what is the value of d ?

A. 14.5

B. 16.9

C. 12.5



D. 18.4



Q18 Arithmetic

A bank offers 5.6% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹7346 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

- A. ₹626.14
- B. ₹612.82
- C. ₹622.82
- D. ₹616.68

Q19 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 8 hours 30 minutes. He would have gained 5 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 13 hours 15 minutes
- B. 14 hours 30 minutes
- C. 12 hours 15 minutes
- D. 13 hours 45 minutes

Q20 Arithmetic

Parvati and Pari invest in a business in the ratio 5 : 26. If total profit is Rs. 3038, then what is difference between the profit (in Rs.) of Parvati and Pari?

- A. 2058
- B. 2008
- C. 1958
- D. 2208

Q21 Arithmetic

Sakshi invested a sum of ₹2500 at 20% per annum compound interest, compounded annually. If she received an amount of ₹4320 after n years, the value of n is:

- A. 2
- B. 4
- C. 3.5
- D. 3

Q22 Arithmetic

A train runs at a speed of 147 kmph to cover a distance of 294 km and then at a speed of 133 kmph to cover a distance of 266 km. Find the average speed of the train for the entire distance.

- A. 187 kmph
- B. 152 kmph
- C. 132 kmph
- D. 140 kmph

Q23 Arithmetic

$\frac{(a^1 \times b^4 \times c^5)}{(a^3 \times b^6 \times c^9)}$ in simplified form is:

- A. $(a^8) \times (b^5) \times (c^{-1})$
- B. $(a^7) \times (b^{-7}) \times (c^{-6})$
- C. $(a^{-5}) \times (b^{-8}) \times (c^2)$
- D. $(a^{-2}) \times (b^{-2}) \times (c^{-4})$



Q24 Arithmetic

The selling price of 50 books is equal to the cost price of 25 books. Find the loss or gain percentage.

A. $\frac{100}{25}\% \text{ loss}$

B. 50 % loss

C. 50 % gain

D. $\frac{100}{25}\% \text{ gain}$

Q25 Arithmetic

A person covers certain distance in 6 hours at a speed of 5 km/h and some more distance in 7 hours at a speed of 9 km/h. Find his average speed for the entire distance covered.

A. $6\frac{2}{13}$

B. $9\frac{2}{13}$

C. $7\frac{2}{13}$

D. $8\frac{2}{13}$

Q26 Arithmetic

The surface area of a solid metallic sphere is 5544 cm^2 . It is melted and recast into a cone of height 84 cm. Find the diameter of the base of the cone so formed. (Use $\pi = \frac{22}{7}$)

A. 46 cm

B. 42 cm

C. 44 cm

D. 40 cm

Q27 Arithmetic

$$\frac{2}{7} + \frac{19}{5} - 2.4 + \left(\frac{4.8}{2.4}\right)^2$$

A. $\frac{131}{35}$

B. $\frac{119}{35}$

C. $\frac{101}{35}$

D. $\frac{199}{35}$



Q28 Arithmetic

Find the value of $\left[(54 \div 6) \times \left\{ \frac{70}{7} + \frac{38}{6} \times (8 - 2) \right\} \right]$

A. 422

B. 429

C. 442

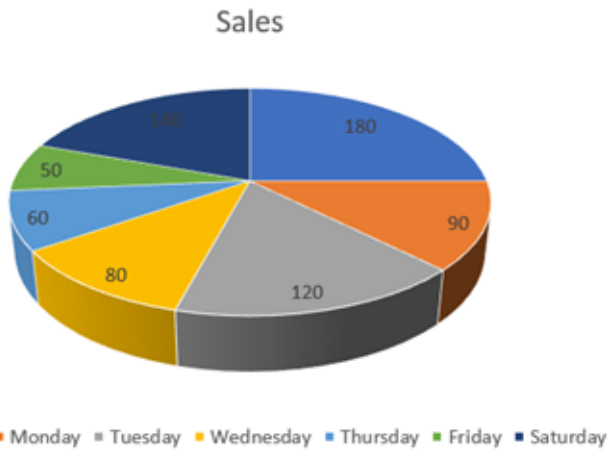
D. 432 **Q29** Arithmetic $0.0\overline{93} + 0.2\overline{3}$ A. $\frac{343}{990}$ B. $\frac{343}{999}$ C. $\frac{323}{990}$ D. $\frac{323}{999}$ **Q30** Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 3 when $y = 4$, find x when $y = 6$.

A. $\frac{190}{216}$ B. $\frac{189}{216}$ C. $\frac{189}{215}$ D. $\frac{191}{215}$ 

Q31 Arithmetic

The pie-chart shows the sales of an item on different days of a week. Study the given pie-chart and answer the question that follows.



The difference in angles made at the centre by the sales on Tuesday and Saturday is (in degrees):

- A. 5
- B. 20
- C. 10
- D. 0

**Q32** Arithmetic

The difference between the smallest and the largest fractions among

$\frac{8}{8}, \frac{6}{6}, \frac{26}{39}, \frac{29}{31}$ *is:*

- A. $\frac{1}{2}$
- B. $\frac{1}{6}$
- C. $\frac{1}{3}$
- D. $\frac{1}{8}$

**Q33** Arithmetic

Find the gain percentage, given that Bushra sold her scooter for ₹ 59112 gaining $\frac{1}{6}$ th of the selling price.

- A. 10%
- B. 5%
- C. 20%
- D. 35%



Q34 Arithmetic

A cylinder of height 13 cm is made from a rectangular sheet of dimension 44 cm $\times$ 13 cm, without any cut. What is the total surface area of the cylinder if it is closed from both ends? (Use $\pi = \frac{22}{7}$)

A. 1. 220 cm²

B. 2. 1280 cm²

C. 3. 440 cm²

D. 4. 880 cm²

**Q35 Arithmetic**

What will be the remainder when $(99^{99} + 99)$ is divisible by 100?

A. 99

B. 96

C. 97

D. 98



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 497094 so that it is completely divisible by 11 is:

- A. 8
- B. 6
- C. 7
- D. 4



Q2 Arithmetic

A shopkeeper lists the price of a fan at 60% above its cost price and offers a 30% discount on its list price. If he earns a profit of ₹60, then what is the list price (in ₹) of the fan?

- A. 873
- B. 800
- C. 1021
- D. 824



Q3 Arithmetic

If a 1092 m long train crosses a pole in 52 seconds, then find the time (in seconds) taken by the train to cross a 294 m long platform.

- A. 61
- B. 60
- C. 66
- D. 63



Q4 Arithmetic

Raghu completes his journey in 20 hours. He covers half the distance at 27 km/h and the rest at 54 km/h. What is the length of the journey (in Km)?

- A. 720
- B. 710
- C. 712
- D. 728



Q5 Arithmetic

The population of a village was 140000. It increased by 5% in the first year and increased by 20% in the second year. Its population after two years is _____.

- A. 147000
- B. 168000
- C. 176400
- D. 175000



Q6 Arithmetic

The smallest natural number which is divisible by 14, 42, 54 and 6 is:

- A. 384
- B. 378
- C. 298
- D. 458



Q7 Arithmetic

The price of fuel decreases by 25%, 60% and 10% in three successive months, but increases by 60% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price?

- A. Decreases by 56.79%
- B. Decreases by 59.51%
- C. Increases by 61.02%
- D. Increases by 59.84%



Q8 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 40 km/h and 22 km/h. The faster train passes the slower train in 40 seconds. The length of each train is:

- A. 90 meters
- B. 82 meters
- C. 100 meters
- D. 114 meters



Q9 Arithmetic

Isha and Anshu together invested ₹44000 in a business. At the end of the year, out of a total profit of ₹8800, Isha's share was ₹1100. What was the investment of Anshu?

A. ₹38110

B. ₹37420

C. ₹38500



D. ₹40115

Q10 Arithmetic

A number when divided by 576 gives remainder 75. If the same number is divided by 24, then find the remainder.

A. 3



B. 2

C. 4

D. 1

Q11 Arithmetic

A shopkeeper marks an article at ₹x and offers a discount of 40% on it. He sells it for ₹255 after charging VAT of 70% on the discounted price. What is the value of ₹x?

A. ₹400

B. ₹100

C. ₹200

D. ₹250

**Q12 Arithmetic**

During sale, Raghav bought a notebook marked for ₹100 at 77% discount and a pen marked for ₹100 at 16% discount. How much (in ₹) did he save due to sale?

A. 92

B. 95

C. 93



D. 91

Q13 Arithmetic

Pramod sold 171 chairs and had a gain equal to the selling price of 57 chairs. What is his profit percentage?

A. 60%

B. 55%

C. 45%

D. 50%

**Q14 Arithmetic**

A bank offers 6.8% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹4879 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹524.58

B. ₹513.29

C. ₹521.27

D. ₹503.29

**Q15 Arithmetic**

In what ratio must Suhail, a wholesaler, mix wheat worth ₹45 per kg with wheat worth ₹75 per kg, so that by selling the mixture at ₹80 per kg, he may gain 25%?

A. 11 : 19



B. 11 : 17

C. 13 : 17

D. 13 : 19

Q16 Arithmetic

The average price of three items of furniture is Rs 15960. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 7448

B. 5320

C. 22344



D. 3192

Q17 Arithmetic

Find the volume of a sphere whose surface area is 1386 cm².

A. 1. 4851 cm²



B. 2. 4726 cm²

C. 3. 4672 cm²

D. 4. 4518 cm²



Q18 Arithmetic

A person drove at 39 kmph for 3.5 hours, then increased his speed by 9 kmph, and reached the destination in another hour. Find the average speed (in kmph) of the person during the entire journey.

A. 41



B. 47

C. 43

D. 45

Q19 Arithmetic

If the average of the four consecutive odd numbers is 42, find the sum of the digits of the largest of these numbers.

A. 7

B. 8

C. 9



D. 5

Q20 Arithmetic

The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 247, determine the number of boys participating in the sports.

A. 1265

B. 1235



C. 1210

D. 1255

Q21 Arithmetic

Parvati and Pari invest in a business in the ratio 7 : 15. If total profit is Rs. 1166, then what is difference between the profit (in Rs.) of Parvati and Pari?

A. 274

B. 324

C. 524

D. 424

**Q22 Arithmetic**

The smallest 1-digit number to be added to the 6-digit number 547363 so that it is completely divisible by 11 is:

A. 5

B. 4

C. 8



D. 6

Q23 Arithmetic

120 l of a mixture of milk and water contains 15% of water. How much water (in litres) should be added to the mixture to make the water content 25%?

A. 20

B. 16



C. 24

D. 12

Q24 Arithmetic

A conical tent has to accommodate 40 persons. Each person requires 5 m^2 space on the ground and 70 m^3 of air to breathe. Find the height (in m) of the tent (use $\pi = 22/7$).

A. 38

B. 42



C. 45

D. 40

Q25 Arithmetic

The area of a square plot is 961 m^2 . The length of each side of the plot (in m) is:

A. 29

B. 39

C. 41

D. 31

**Q26 Arithmetic**

A bank offers 9.2% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹2907 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹417.31

B. ₹407.31



C. ₹395.33

D. ₹399.22



Q27 Arithmetic

The average of eight numbers is 20. The average of five of these numbers is 21. The average of the remaining three numbers is

A. 18.33



B. 17.33

C. 20.33

D. 19.33

Q28 Arithmetic

Find the simple interest (in ₹) on ₹2000 at 6.25% per annum rate of interest for the period from 12 February 2023 to 26 April 2023

A. 26

B. 24

C. 23

D. 25

**Q29 Arithmetic**

Find the value of
$$\left[(28 \times 10) \times \left\{ 4 \div 4 \times \frac{(19 - 12)}{7} \right\} \right]$$

A. 275

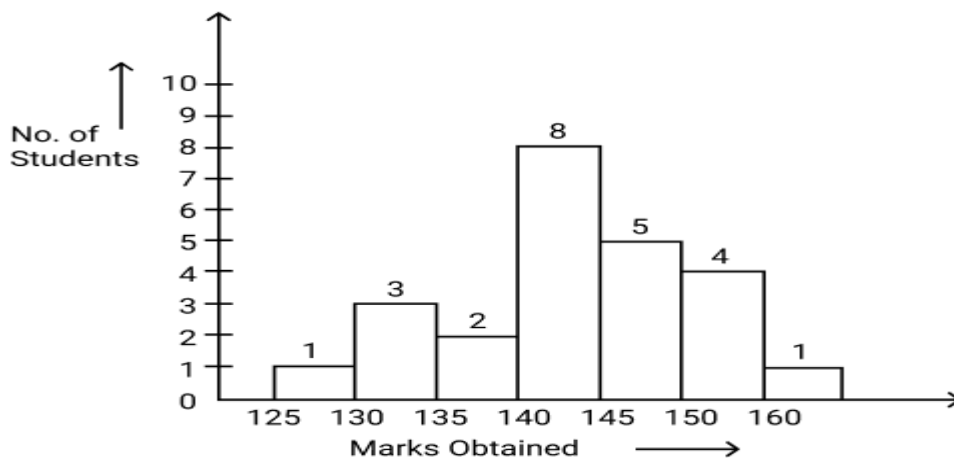
B. 298

C. 266

D. 280

**Q30 Arithmetic**

Observe the graph and answer the following question.



How many students obtained marks more than 135?

A. 18



B. 14

C. 12

D. 16



Q31 Arithmetic

If $29 \times 2 \times 742 \div \sqrt{2809} = y + 784$, then find the value of y.

A. 36

B. 35

C. 26

D. 28

**Q32** Arithmetic

Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 112 m and 114 m.

$$\text{take } \pi = \frac{22}{7}$$

A. 352

B. 350

C. 347

D. 354

**Q33** Arithmetic

If $13 \times 7 \times 686 \div \sqrt{2401} = y + 785$, then find the value of y.

A. 499

B. 488

C. 489

D. 498

**Q34** Arithmetic

$$0.1\overline{23} + 0.3\overline{9}$$

A. $\frac{578}{1100}$ B. $\frac{569}{1100}$ C. $\frac{579}{1100}$ D. $\frac{568}{1100}$ 

Q35 Arithmetic

$$5 \times \left(\frac{3}{4}\right) - 2 \times \left(\frac{1}{4}\right) - 3 \times \left(\frac{1}{4}\right) - \left(\frac{1}{4}\right)$$

A. $\frac{7}{4}$

B. $\frac{9}{4}$



C. $\frac{3}{4}$

D. $\frac{5}{4}$



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

Find the simple interest (in ₹) on ₹2000 at 6.5% per annum rate of interest for the period from 3 February 2023 to 17 April 2023

A. 24

B. 26



C. 25

D. 27

Q2 Arithmetic

The area of a square plot is 7569 m^2 . The length of each side of the plot (in m) is:

A. 87



B. 97

C. 63

D. 69

Q3 Arithmetic

The number 18579285492174 is divisible by:

A. 4

B. 5

C. 9

D. 11



Q4 Arithmetic

The side of a rhombus is 20 cm and the length of the one of the diagonals is 32 cm. Find the area (in cm^2) of the rhombus.

A. 560

B. 384



C. 424

D. 484

Q5 Arithmetic

A shopkeeper sells an item for ₹953.7 after giving two successive discounts of 49% and 75% on its marked price. Had he not given any discount, he would have earned a profit of 10%. What is the cost price (in ₹) of the item?

A. 6763

B. 6796

C. 6794

D. 6800



Q6 Arithmetic

The areas of three adjacent faces of a solid cuboid are 192 cm^2 , 242 cm^2 and 24 cm^2 . What is the volume (in cm^3) of the cuboid?

A. 1042

B. 1328

C. 1132

D. 1056



Q7 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 723265 so that it is completely divisible by 11 is:

A. 4

B. 2

C. 6

D. 7



Q8 Arithmetic

The difference between the simple interest and the compound interest, compounded annually, on a certain sum of money for 2 years at 14% per annum is ₹633. Find the sum. [Give your answer to integral number without rounded off.]

A. ₹32295



B. ₹32313

C. ₹32288

D. ₹32282



Q9 Arithmetic

During sale, Raghav bought a notebook marked for ₹50 at 10% discount and a pen marked for ₹100 at 83% discount. How much (in ₹) did he save due to sale?

A. 89

B. 88 ☒

C. 91

D. 86

Q10 Arithmetic

The smallest natural number which is divisible by 24, 16, 15 and 40 is:

A. 180

B. 240 ☒

C. 245

D. 172

Q11 Arithmetic

Mamta and Geeta invest in a business in the ratio 1 : 11. If total profit is Rs. 4500, then what is difference between the profit (in Rs.) of Mamta and Geeta?

A. 3850

B. 3750 ☒

C. 3900

D. 3700

Q12 Arithmetic

A bank offers 9.6% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹8908 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____. [Give your answer correct to 2 decimal places.]

A. ₹1313.27

B. ₹1303.08

C. ₹1299.47

D. ₹1303.27 ☒**Q13 Arithmetic**

What time (in seconds) is required for a 284 m long train to cross a 676 m long tunnel, if the train travels at a speed of 18 km/h?

A. 195

B. 188

C. 192 ☒

D. 193

Q14 Arithmetic

The average price of three items of furniture is Rs 15945. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 7441

B. 3189

C. 5315

D. 22323 ☒**Q15 Arithmetic**

A 372 m long train crosses a man walking at a speed of 6.9 km/h in the opposite direction in 24 seconds. What is the speed (in km/h) of the train?

A. 48.9 ☒

B. 49.2

C. 51.3

D. 46.5

Q16 Arithmetic

A number when increased by 50 %, gives 3900. The number is:

A. 2600 ☒

B. 5200

C. 7800

D. 1300

Q17 Arithmetic

The average price of three items of furniture is Rs 15990. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 3198

B. 7462

C. 5330

D. 22386 ☒**Q18 Arithmetic**

The sides of a triangle are 60 cm, 61 cm, and 11 cm. What is its area? (in cm^2)

A. 328

B. 349

C. 330 ☒

D. 309



Q19 Arithmetic

The average marks of 35 students is 52. If each student's marks are decreased by 3, what will be the sum of the digits of the new average?

A. 14

B. 13 ☒

C. 12

D. 15

Q20 Arithmetic

If third proportional of 48 and 24 be x, then what is the value of x?

A. 15

B. 12 ☒

C. 10

D. 13

Q21 Arithmetic

In an election between two candidates, 75% of the eligible voters cast their votes and 6% of the votes cast were declared invalid. A candidate got 15228 votes, which were 90% of the total valid votes. Find the total number of eligible voters.

A. 24000 ☒

B. 27000

C. 25600

D. 24850

Q24 Arithmetic

$$\frac{2}{8}, \frac{7}{24}, \frac{51}{76}, \frac{82}{85}$$

A. $\frac{2}{8}$ B. $\frac{7}{24}$ C. $\frac{82}{85}$ ☒D. $\frac{51}{76}$ **Q22 Arithmetic**

Anmol completes his journey in 15 hours. He covers half the distance at 62 km/h and the rest at 93 km/h. What is the length of the journey (in Km)?

A. 1110

B. 1117

C. 1116 ☒

D. 1114

Q23 Arithmetic

The average of 41 numbers is 58. The average of the first 16 numbers is 46 and the average of the last 26 numbers is 66. If the 16th number from the beginning is excluded, then what is the average of the remaining numbers?

A. 55.81

B. 53.107

C. 57.6 ☒

D. 61.1



Q25 Arithmetic

$$\frac{4}{7} + \frac{5}{7} + \frac{3}{14} + \frac{1}{7} - 2 =$$

A. $\frac{1}{14}$

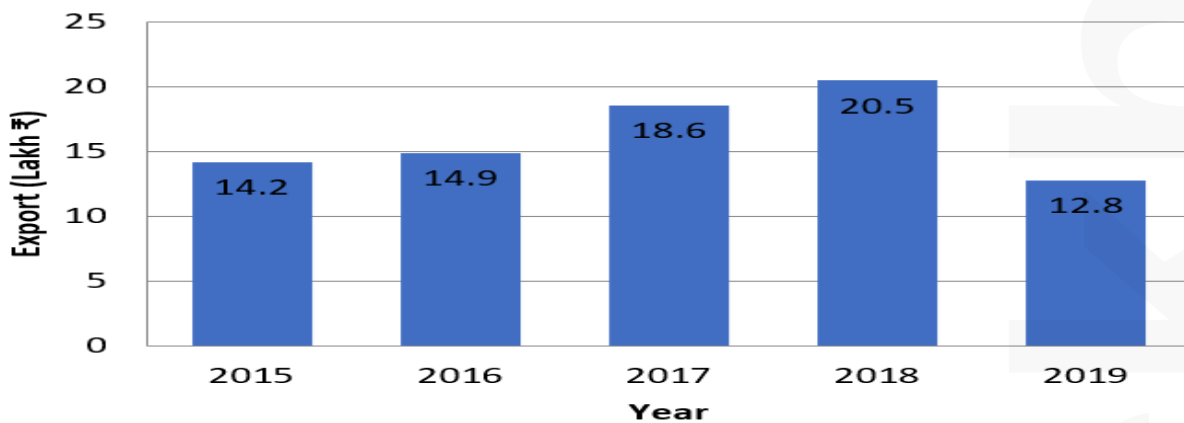
B. $\frac{5}{14}$

C. $-\frac{8}{14}$

D. $-\frac{5}{14}$ ✓

Q26 Arithmetic

The following bar graph represents the export of sugarcane (in lakh ₹) during five years. Study the bar graph carefully and answer the question given below:



What is the approximate per cent decrement in export in 2019 in comparison to the average export during these five years?

A. 19%

B. 20%

C. 21% ✓

D. 22%



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Q27 Arithmetic

$$0.\overline{169} + 0.\overline{3}$$

A. $\frac{151}{900}$

B. $\frac{152}{300}$

C. $\frac{151}{300}$ 

D. $\frac{151}{990}$

Q28 Arithmetic

By selling an article at $\frac{6}{14}$ of its actual selling price, Sharad incurs a loss of 12%. If he sells it at 90% of its actual selling price, then the profit percentage is:

A. 87.9%

B. 85.4%

C. 85.9%

D. 84.8% **Q29** Arithmetic

If $p = \{(-1.5) \times (-8.2) - 3.3\}$ then find the sum of the digits in p^3 .

A. 17

B. 16

C. 18 

D. 15

Q30 Arithmetic

A person covers certain distance in 9 hours at a speed of 7 km/h and some more distance in 5 hours at a speed of 5 km/h. Find his average speed for the entire distance covered.

A. $5\frac{2}{7}$

B. $6\frac{2}{7}$ 

C. $8\frac{2}{7}$

D. $7\frac{2}{7}$



Q31 Arithmetic

$$\frac{3}{5}, \frac{2}{44}, \frac{40}{47}, \frac{35}{53}$$

A. $\frac{35}{53}$

B. $\frac{2}{44}$

C. $\frac{40}{47}$ ✓

D. $\frac{3}{5}$

Q32 Arithmetic

Find the value of $\left[(20 \times 13) \times \left\{ 4 \div 4 \times \frac{(19 - 13)}{3} \right\} \right]$

A. 510

B. 527

C. 525

D. 520 ✓

Q33 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 3 when $y = 2$, find x when $y = 4$.

A. $\frac{2}{4}$

B. $\frac{3}{3}$

C. $\frac{1}{4}$

D. $\frac{1}{3}$ ✓



Q34 Arithmetic

A flask is full of 20% sulphuric acid solution. A part of this 20% sulphuric acid solution is replaced by a 4% sulphuric acid solution and in this process 10% sulphuric acid solution is obtained. What fraction of 20% sulphuric acid solution is replaced from the flask?

A. $\frac{2}{5}$

B. $\frac{5}{8}$ ✓

C. $\frac{3}{5}$

D. $\frac{7}{8}$

Q35 Arithmetic

Find the gain percentage, given that Anubha sold her scooter for ₹97830 gaining $\frac{1}{5}$ th of the selling price.

A. 35%

B. 25% ✓

C. 40%

D. 30%



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

In a cluster, 3 weavers can make 12 sarees in 4 days. Find the average number of sarees that can be made by each weaver in a day.

A. 1



B. 2.5

C. 2

D. 1.5

Q2 Arithmetic

A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 918 grams for 1000 grams. What is his profit percentage (rounded off to 2 decimal places)?

A. 8.93



B. 5

C. 5.68

D. 14.5

Q3 Arithmetic

The ratio of the heights of a right circular cone and a right circular cylinder is 3 : 8 and the ratio of the radii of their bases is 8 : 5. If the volume of the cylinder is 400 cm^3 , then the volume (in cm^3) of the cone is:

A. 134

B. 124

C. 131

D. 128



Q4 Arithmetic

LCM and HCF of two numbers are 108 and 9 respectively. If one of the numbers is 36, then find the other number.

A. 25

B. 27



C. 30

D. 28

Q5 Arithmetic

A shopkeeper sells an item for ₹583.2 after giving two successive discounts of 25% and 40% on its marked price. Had he not given any discount, he would have earned a profit of 62%. What is the cost price (in ₹) of the item?

A. 838

B. 824

C. 800



D. 831

Q6 Arithmetic

Three partners invested in a business in the ratio 2:7:8. They invested their capitals for 4 months, 1 months and 10 months, respectively. What was the ratio of their profits?

A. 7:7:80

B. 8:7:80



C. 10:7:80

D. 6:7:80

Q7 Arithmetic

Suman invested a sum of ₹8000 at 5% per annum compound interest, compounded annually. If she received an amount of ₹9261 after n years, the value of n is:

A. 2.79999995231628

B. 3



C. 3.5

D. 4

Q8 Arithmetic

Isha and Anshu together invested ₹44300 in a business. At the end of the year, out of a total profit of ₹7000, Isha's share was ₹1400. What was the investment of Anshu?

A. ₹35190

B. ₹33845

C. ₹35440



D. ₹37060



Q9 Arithmetic

The sides of a triangle are 16 cm, 30 cm, and 34 cm. What is its area? (in cm^2)

A. 240



B. 225

C. 257

D. 270

Q10 Arithmetic

Three partners invested in a business in the ratio 6:3:2. They invested their capitals for 7 months, 4 months and 3 months, respectively. What was the ratio of their profits?

A. 7:2:1



B. 8:2:1

C. 6:2:1

D. 10:2:1

Q11 Arithmetic

A can is completely filled with milk. 6 litre of milk is taken out of the can and is filled with water. This operation is performed four more times. Now, the ratio of milk and water in the can is 32 : 211. What is the volume of the can?

A. 21 litre

B. 15 litre

C. 20 litre

D. 18 litre

**Q12 Arithmetic**

The smallest natural number which is divisible by 15, 60, 6 and 17 is:

A. 1020



B. 1065

C. 1030

D. 1106

Q13 Arithmetic

If 25% of a number is added to 72, then the result is the same number. 70% of the same number is:

A. 37.2

B. 97.2

C. 67.2



D. 87.2

Q14 Arithmetic

Two trains of equal length are running on parallel lines in the same direction at speeds of 101 km/h and 65 km/h. The faster train passes the slower train in 30 seconds. The length of each train is:

A. 152 meters

B. 150 meters



C. 137 meters

D. 155 meters

Q15 Arithmetic

A shopkeeper lists the price of a fan at 25% above its cost price and offers a 16% discount on its list price. If he earns a profit of ₹141, then what is the list price (in ₹) of the fan?

A. 3525



B. 3268

C. 3321

D. 3305

Q16 Arithmetic

Raghav's average earning per month in the first three months of a year was ₹22560. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹90078, then what will be Raghav's average earning (in ₹) per month from May to December?

A. 122427



B. 122428

C. 122423

D. 122430

Q17 Arithmetic

A train runs at a speed of 96 kmph to cover a distance of 288 km and then at a speed of 126 kmph to cover a distance of 252 km. Find the average speed of the train for the entire distance.

A. 90 kmph

B. 108 kmph



C. 86 kmph

D. 158 kmph



Q18 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 6 hours 45 minutes. He would have gained 4 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 11 hours 15 minutes
- B. 10 hours 45 minutes ✓
- C. 10 hours 30 minutes
- D. 9 hours 45 minutes

Q19 Arithmetic

A sum, when invested at 10% simple interest per annum, amounts to ₹9600 after 2 years. What is the simple interest (in ₹) on the same sum at the same rate in 1 year?

- A. 400
- B. 1600
- C. 800 ✓
- D. 3200

Q20 Arithmetic

A number when increased by 50 %, gives 3930. The number is:

- A. 7860
- B. 1310
- C. 2620 ✓
- D. 5240

Q21 Arithmetic

The average price of three items of furniture is Rs 15885. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

- A. 5295
- B. 3177
- C. 22239 ✓
- D. 7413

Q22 Arithmetic

During sale, Raghav bought a notebook marked for ₹100 at 53% discount and a pen marked for ₹40 at 85% discount. How much (in ₹) did he save due to sale?

- A. 85
- B. 87 ✓
- C. 89
- D. 90

Q23 Arithmetic

The LCM of 27, 48, 276 and 368 is:

- A. 9988
- B. 9927
- C. 9855
- D. 9936 ✓

Q24 Arithmetic

At what rate per cent per annum will a certain sum of money multiply itself by 97 times in 2 years, the interest being compounded annually? [Give your answer correct to 1 decimal place.]

- A. 881.8
- B. 884.6
- C. 887.2
- D. 884.8 ✓

Q25 Arithmetic

Vishal covers 104 km in a boat in 30 hours against the stream and he takes 12 hours with the stream then find the speed of the stream?

- A. 2.6 km/h ✓
- B. 11.35 km/h
- C. 7.52 km/h
- D. 6.65 km/h

Q26 Arithmetic

LCM and HCF of two numbers are 180 and 12 respectively. If one of the numbers is 36, then find the other number.

- A. 60 ✓
- B. 58
- C. 62
- D. 61

Q27 Arithmetic

The average price of three items of furniture is Rs 15975. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

- A. 22365 ✓
- B. 5325
- C. 3195
- D. 7455



Q28 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 638970 so that it is completely divisible by 11 is:

A. 4

B. 5

C. 9



D. 6

Q29 Arithmetic

If $16 \times 8 \times 700 \div \sqrt{2500} = y + 667$, then find the value of y.

A. 1117

B. 1115

C. 1125



D. 1124

Q30 Arithmetic

$$\frac{4}{6} + \frac{4}{6} + \frac{2}{12} + \frac{4}{6} - 4 =$$

A. $-\frac{25}{12}$ B. $-\frac{18}{12}$ C. $-\frac{23}{12}$ D. $-\frac{22}{12}$ 

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Q31 Arithmetic

$$\frac{7}{8}, \frac{3}{34}, \frac{21}{81}, \frac{75}{76}$$

A. $\frac{21}{81}$

B. $\frac{7}{8}$

C. $\frac{3}{34}$

D. $\frac{75}{76}$ ✓

Q32 Arithmetic

$\frac{(a^8 \times b^6 \times c^9)}{(a^4 \times b^9 \times c^9)}$ in simplified form is:

A. $(a^{-6}) \times (b^{-1}) \times (c^6)$

B. $(a^{10}) \times (b^{-1}) \times (c^{-4})$

C. $(a^4) \times (b^{-3}) \times (c^0)$ ✓

D. $(a^{-7}) \times (b^{-8}) \times (c^1)$



Q33 Arithmetic

The table below shows the profit earned by five friends in four different years. Study the table carefully to answer the question that follows.

Friends	2020	2021	2022	2023
Alex	9310	7250	6523	3546
Balaji	8240	7500	6542	2563
Chand	7560	6540	5140	2580
Dinesh	3524	6000	6780	3870
Elena	4260	9170	5010	6520

Find the amount which when lent on compound interest at 15% interest being compounded annually for 2 years, gives total interest equal to profit earned by Chand in 2023.

A. ₹8,000



B. ₹9,000

C. ₹6,000

D. ₹7,000

Q34 Arithmetic

$$\frac{4}{9}, \frac{4}{26}, \frac{56}{71}, \frac{28}{81}$$

A. $\frac{4}{26}$ B. $\frac{56}{71}$ C. $\frac{28}{81}$ D. $\frac{4}{9}$ **Q35** Arithmetic

Tarika has a decorative wall – hanging in the shape of a regular hexagon having side 10 cm. What is the area (in cm^2) of the decorative wall – hanging? (Take $\sqrt{3} = 1.7$)

A. 255



B. 265

C. 250

D. 260



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Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 459039 so that it is completely divisible by 11 is:

- A. 3
B. 6
C. 5
D. 2



Q2 Arithmetic

Given that $69^{0.07} = x$, $69^{0.67} = y$ and $x^z = y^7$, then the value of z is close to:

- A. 67.51
B. 67
C. 66.87
D. 69.08



Q3 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹37096. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹87305, then what will be Lalit's average earning (in ₹) per month from May to December?

- A. 110095
B. 110094
C. 110089
D. 110091



Q4 Arithmetic

Three partners invested in a business in the ratio 8:4:6. They invested their capitals for 10 months, 4 months and 12 months, respectively. What was the ratio of their profits?

- A. 11:2:9
B. 10:2:9
C. 12:2:9
D. 8:2:9



Q5 Arithmetic

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 6 hours 15 minutes. He would have gained 2 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 8 hours 45 minutes
B. 9 hours 30 minutes
C. 8 hours 15 minutes
D. 7 hours 15 minutes



Q6 Arithmetic

During sale, Raghav bought a notebook marked for ₹12 at 25% discount and a pen marked for ₹75 at 20% discount. How much (in ₹) did he save due to sale?

- A. 17
B. 18
C. 20
D. 19



Q7 Arithmetic

400 guavas were bought at ₹1420 per hundred and were sold at a profit of ₹820. Find the selling price (in ₹) per dozen of guavas.

- A. 210
B. 185
C. 205
D. 195



Q8 Arithmetic

If the average of the three consecutive even numbers is 42, find the sum of the smallest and largest of these numbers.

- A. 82
B. 86
C. 84
D. 40



Q9 Arithmetic

What time (in seconds) is required for a 953 m long train to cross a 532 m long tunnel, if the train travels at a speed of 54 km/h?

- A. 96
- B. 107
- C. 106
- D. 99

**Q10 Arithmetic**

Find the remainder when $49 \times 51 \times 54 \times 37 \times 123$ is divided by 24.

- A. 8
- B. 6
- C. 10
- D. 4

**Q11 Arithmetic**

The average of eight numbers is 20. The average of five of these numbers is 13. The average of the remaining three numbers is

- A. 30.67
- B. 31.67
- C. 32.67
- D. 33.67

**Q12 Arithmetic**

A sum, when invested at 20% simple interest per annum, amounts to ₹2400 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 1 year?

- A. 150
- B. 600
- C. 300
- D. 1200

**Q13 Arithmetic**

The population of a village was 130000. It increased by 15% in the first year and increased by 20% in the second year. Its population after two years is _____.

- A. 179400
- B. 175500
- C. 149500
- D. 156000

**Q14 Arithmetic**

If the volume of cube is 29791 m^3 , then find the total surface area of cube in m^2 .

- A. 5766
- B. 5784
- C. 5733
- D. 5794

**Q15 Arithmetic**

Four litres of paint was required to paint the surface of a solid sphere. If 4 identical pieces were made of this solid sphere, then how many litres of paint would be required to paint all the surfaces of these 4 pieces?

- A. 7
- B. 6
- C. 8
- D. 10

**Q16 Arithmetic**

A 976 m long train crosses a man walking at a speed of 3.5 km/h in the opposite direction in 18 seconds. What is the speed (in km/h) of the train?

- A. 191.6
- B. 192.6
- C. 189.9
- D. 188.7

**Q17 Arithmetic**

The average of 7 numbers is 43. If each number is decreased by 3, what will the new average be?

- A. 7
- B. 43
- C. 40
- D. 37

**Q18 Arithmetic**

If 25% of a number is added to 66, then the result is the same number. 80% of the same number is:

- A. 100.4
- B. 90.4
- C. 70.4
- D. 40.4



Q19 Arithmetic

Suraj covers 598 km in a boat in 39 hours against the stream and he takes 12 hours with the stream then find the speed of the stream?

- A. 16.23 km/h
- B. 17.25 km/h
- C. 10.58 km/h
- D. 15.63 km/h

**Q20 Arithmetic**

A shopkeeper sells an item for ₹855.4 after giving two successive discounts of 90% and 75% on its marked price. Had he not given any discount, he would have earned a profit of 40%. What is the cost price (in ₹) of the item?

- A. 24471
- B. 24440
- C. 24427
- D. 24400

**Q21 Arithmetic**

Trupti and Suhani invest in a business in the ratio 2 : 6. If total profit is Rs. 2480, then what is difference between the profit (in Rs.) of Trupti and Suhani?

- A. 1340
- B. 1190
- C. 1390
- D. 1240

**Q22 Arithmetic**

Manav's average earning per month in the first three months of a year was ₹41944. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹63849, then what will be Manav's average earning (in ₹) per month from May to December?

- A. 72179
- B. 72180
- C. 72182
- D. 72175

**Q23 Arithmetic**

Find the value of $76^{-15} \div 76^4 \times 76^{-5}$

- A. $1. 76^{-31}$
- B. $2. 76^{-22}$
- C. $3. 76^{-20}$
- D. $4. 76^{-24}$

**Q24 Arithmetic**

Anushka invested a sum of ₹6400 at 5% per annum compound interest, compounded annually. If she received an amount of ₹7056 after n years, the value of n is:

- A. 3
- B. 1.20000004768372
- C. 2
- D. 2.40000009536743

**Q25 Arithmetic**

Utsavi invested a sum of ₹2000 at 15% per annum compound interest, compounded annually. If she received an amount of ₹2645 after n years, the value of n is:

- A. 1.6
- B. 2.5
- C. 3
- D. 2



Q26 Arithmetic

$$\frac{5}{9}, \frac{6}{21}, \frac{15}{73}, \frac{18}{82}$$

A. $\frac{5}{9}$



B. $\frac{18}{82}$

C. $\frac{6}{21}$

D. $\frac{15}{73}$

Q27 Arithmetic

Simplify the following:

$$[\{(-0.4) + (4.6)^2 + (2.3)^2\} \div 5] \times 100$$

A. 517

B. 512

C. 521



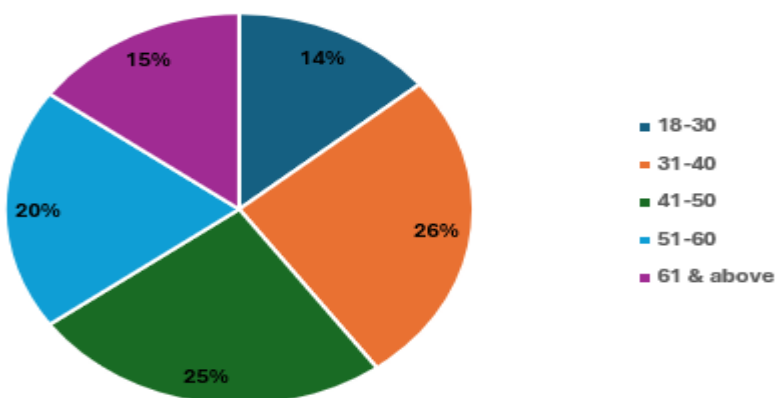
D. 571

Q28 Arithmetic

Study the given graph and answer the question that follows.

The given pie chart shows the number of members in Hyderabad Gymkhana Club of various age groups.

Total Members = 62500



If 24% of the total members in the age group 18-30 are aged 21 years or below, find the members in the age group 18-21.

A. 1980

B. 2250

C. 2300

D. 2100



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Q29 Arithmetic

The curved surface area of a hemispherical bowl is 1232 cm^2 . Find the volume (in cm^3) of the bowl. (Use $\pi = \frac{22}{7}$ and up to 2 decimal places)

A. 5749.33



B. 5540.33

C. 5049.22

D. 4049.11

Q30 Arithmetic

The difference between the smallest and the largest fractions among

$\frac{6}{7}$, $\frac{4}{8}$, $\frac{32}{39}$, $\frac{25}{27}$ is:

A. $\frac{23}{56}$ B. $\frac{23}{58}$ C. $\frac{23}{54}$ D. $\frac{23}{55}$ **Q31** Arithmetic

$\frac{(a^5 \times b^5 \times c^8)}{(a^8 \times b^5 \times c^1)}$ in simplified form is:

A. $(a^3) \times (b^{-1}) \times (c^{-9})$ B. $(a^{-6}) \times (b^{-6}) \times (c^{-6})$ C. $(a^{-3}) \times (b^0) \times (c^7)$ D. $(a^{-10}) \times (b^{-2}) \times (c^0)$ 

Q32 Arithmetic

The difference between the smallest and the largest fractions among

$\frac{4}{9}$, $\frac{3}{7}$, $\frac{31}{37}$, $\frac{12}{20}$ is:

A. $\frac{106}{259}$



B. $\frac{106}{255}$

C. $\frac{106}{258}$

D. $\frac{106}{261}$

Q33 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 8 when $y = 3$, find x when $y = 6$.

A. $\frac{209}{216}$

B. $\frac{208}{215}$



C. $\frac{208}{216}$

D. $\frac{210}{215}$

Q34 Arithmetic

By selling an article at $\frac{4}{10}$ of its actual selling price, Nirbhay incurs a loss of 17%. If he sells it at 88% of its actual selling price, then the profit percentage is:

A. 81.3%

B. 82.6%



C. 84.4%

D. 83.4%



Q35 Arithmetic

$$0.\overline{001} + 0.\overline{01} + 0.\overline{1}$$

A. $\frac{1211}{9990}$

B. $\frac{1211}{9900}$ ☒

C. $\frac{1211}{9999}$

D. $\frac{1212}{9900}$



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

Raghu completes his journey in 15 hours. He covers half the distance at 57 km/h and the rest at 78 km/h. What is the length of the journey (in Km)?

A. 994

B. 980

C. 988



D. 989

Q2 Arithmetic

Evaluate: $33 \div 11 \times 3 - 3 \times 3$

A. 3

B. 0



C. -1

D. 2

Q3 Arithmetic

Lalit's average earning per month in the first three months of a year was ₹12544. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹41852, then what will be Lalit's average earning (in ₹) per month from May to December?

A. 55725

B. 55722



C. 55718

D. 55719

Q4 Arithmetic

LCM and HCF of two numbers are 196 and 7 respectively. If one of the numbers is 49, then find the other number.

A. 29

B. 31

C. 28



D. 30

Q5 Arithmetic

A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 812 grams for 1000 grams. What is his profit percentage (rounded off to 2 decimal places)?

A. 23.15



B. 24.85

C. 20.91

D. 26.29

Q6 Arithmetic

A 135 m long train crosses a man walking at a speed of 10.6 km/h in the opposite direction in 12 seconds. What is the speed (in km/h) of the train?

A. 31.9

B. 34.4

C. 29.8



D. 32.1

Q7 Arithmetic

A sum, when invested at 10% simple interest per annum, amounts to ₹9360 after 2 years. What is the simple interest (in ₹) on the same sum at the same rate in 2 year?

A. 1560



B. 780

C. 3120

D. 6240

Q8 Arithmetic

During sale, Raghav bought a notebook marked for ₹15 at 80% discount and a pen marked for ₹100 at 66% discount. How much (in ₹) did he save due to sale?

A. 80

B. 78



C. 75

D. 79



Q9 Arithmetic

The average age of Tinku, Pinku and Rinu was 36 years and that of Pinku and Rinu was 25 years. Find the age of Tinku.

- A. 54 years
- B. 52 years
- C. 58 years
- D. 56 years

**Q10 Arithmetic**

Three partners invested in a business in the ratio 5:1:9. They invested their capitals for 2 months, 9 months and 11 months, respectively. What was the ratio of their profits?

- A. 13:9:99
- B. 8:9:99
- C. 9:9:99
- D. 10:9:99

**Q11 Arithmetic**

The average of 7 numbers is 53. If each number is increased by 4, what will the new average be?

- A. 57
- B. 53
- C. 7
- D. 61

**Q12 Arithmetic**

Find the volume of a hemisphere of radius 7.7 cm. (Use $\pi = 22/7$) (Correct up to one decimal place)

- A. 1.756.5 cm³
- B. 2.956.5 cm³
- C. 3.856.5 cm³
- D. 4.656.5 cm³

**Q13 Arithmetic**

To obtain a mixture valued at ₹205.50 per kg, in what ratio should a grocer combine two types of pulses that cost ₹203 per kg and ₹215 per kg, respectively?

- A. 5 : 17
- B. 17 : 5
- C. 19 : 5
- D. 5 : 19

**Q14 Arithmetic**

Given that $137^{0.1} = x$, $137^{0.68} = y$ and $x^z = y^4$, then the value of z is close to:

- A. 25.05
- B. 29.14
- C. 27.13
- D. 27.2

**Q15 Arithmetic**

A vendor claims to sell wheat at a loss of 35%. But he cheats by using weights that weigh 60% less than what is mentioned on them. What is his profit percentage (rounded off to 2 decimal places)?

- A. 64.56
- B. 57.39
- C. 58.64
- D. 62.50

**Q16 Arithmetic**

Bhavna and Bhumi invest in a business in the ratio 2 : 10. If total profit is Rs. 1140, then what is difference between the profit (in Rs.) of Bhavna and Bhumi?

- A. 910
- B. 810
- C. 860
- D. 760

**Q17 Arithmetic**

The average of 7 numbers is 51. If each number is increased by 7, what will the new average be?

- A. 65
- B. 7
- C. 51
- D. 58

**Q18 Arithmetic**

A man sold an article for ₹504 by first giving a d% discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹3600, then what is the value of d?

- A. 41
- B. 43
- C. 39
- D. 38



Q19 Arithmetic

A number when divided by a divisor leaves a remainder of 42. When thrice the original number is divided by the same divisor, the remainder is 74. What is the value of the divisor?

A. 55

B. 54

C. 53

D. 52

**Q20 Arithmetic**

In an election between two candidates, 80% of the voters cast their vote out of which 53 votes were declared invalid. The winner got 48% of all the voters in the list and he won by 1013 votes. The number of voters on the list was:

A. 5600

B. 6000



C. 6500

D. 5000

Q21 Arithmetic

A 150 m long train crosses a man walking at a speed of 4 km/h in the opposite direction in 25 seconds. What is the speed (in km/h) of the train?

A. 15.6

B. 17.2

C. 22.8

D. 17.6

**Q22 Arithmetic**

If the interest earned during the 2nd year on a certain sum is ₹8096, and the rate of interest is 10% per annum compounded annually, then the sum is:

A. ₹73600



B. ₹74495

C. ₹74550

D. ₹74570

Q23 Arithmetic

A number when increased by 50 %, gives 3600. The number is:

A. 2400



B. 7200

C. 1200

D. 4800

Q24 Arithmetic

Utsavi invested a sum of ₹7500 at 18% per annum compound interest, compounded annually. If she received an amount of ₹10443 after n years, the value of n is:

A. 2.79999995231628

B. 3

C. 1.6

D. 2

**Q25 Arithmetic**

A 976 m long train crosses a man walking at a speed of 3.7 km/h in the opposite direction in 16 seconds. What is the speed (in km/h) of the train?

A. 211.8

B. 215.6

C. 215.9



D. 214.5

Q26 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 649389 so that it is completely divisible by 11 is:

A. 7



B. 5

C. 8

D. 6



Q27 Arithmetic

The volume (in cm^3) of a wire of diameter 6 cm and length 7 m is:

take $\pi = \frac{22}{7}$

A. 20700

B. 19500

C. 20400

D. 19800

**Q28** Arithmetic

$$\frac{5}{8}, \frac{5}{26}, \frac{63}{64}, \frac{44}{88}$$

A. $\frac{5}{26}$

B. $\frac{5}{8}$

C. $\frac{63}{64}$



D. $\frac{44}{88}$

Q29 Arithmetic

$$0.\overline{234} + 0.\overline{29}$$

A. $\frac{23}{90}$

B. $\frac{25}{99}$

C. $\frac{29}{55}$



D. $\frac{29}{99}$



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Q30 Arithmetic

What is a cone's total surface area if its height is 20 cm and radius is 15 cm?

(Use $\pi = \frac{22}{7}$)

A. $\frac{14860}{7} \text{ cm}^2$

B. $\frac{14880}{7} \text{ cm}^2$

C. $\frac{14850}{7} \text{ cm}^2$ ✓

D. $\frac{14870}{7} \text{ cm}^2$

Q31 Arithmetic

$0.\overline{123} + 0.01\overline{2} + 3$

A. $3\frac{135}{990}$

B. $3\frac{134}{999}$

C. $3\frac{135}{999}$

D. $3\frac{134}{990}$ ✓

Q32 Arithmetic

$0.\overline{27} + 0.3\overline{9} + 3$

A. $3\frac{7}{3}$

B. $3\frac{1}{3}$

C. $3\frac{5}{3}$

D. $3\frac{2}{3}$ ✓



Q33 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 4 when $y = 3$, find x when $y = 9$.

A. $\frac{1}{8}$

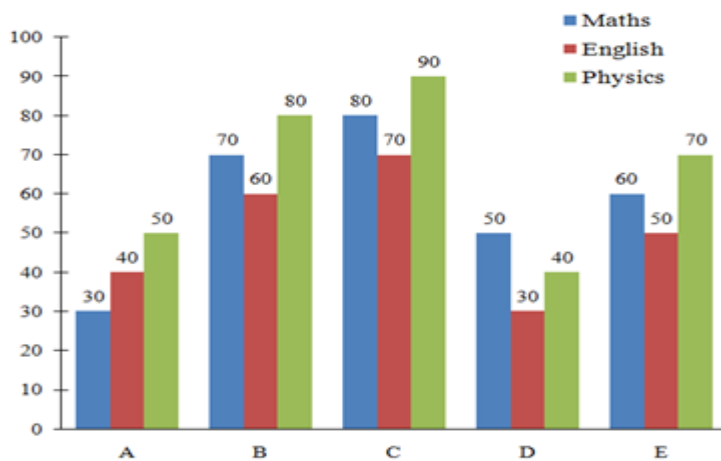
B. $\frac{2}{8}$

C. $\frac{3}{7}$

D. $\frac{1}{7}$ ✓

Q34 Arithmetic

Study the following graph carefully and answer the question given below. Marks scored by five students in subjects (Maths, English and Physics).



What is the difference between the total marks obtained by C and the total marks obtained by E?

A. 60 ✓

B. 20

C. 80

D. 40

Q35 Arithmetic

Find the value of
$$\left[(27 \times 11) \times \left\{ 8 \div 8 \times \frac{(19 - 15)}{4} \right\} \right]$$

A. 289

B. 297 ✓

C. 282

D. 309



Arithmetic

35 Questions • Answer Key

Q1 Arithmetic

Bhanu covers 200 km in a boat in 48 hours against the stream and he takes 30 hours with the stream then find the speed of the stream?

A. 3.95 km/h

B. 1.25 km/h ✓

C. 3.12 km/h

D. 4.16 km/h

Q2 Arithmetic

Raghu completes his journey in 15 hours. He covers half the distance at 28 km/h and the rest at 32 km/h. What is the length of the journey (in Km)?

A. 448 ✓

B. 451

C. 443

D. 452

Q3 Arithmetic

LCM and HCF of two numbers are 150 and 5 respectively. If one of the numbers is 30, then find the other number.

A. 24

B. 27

C. 23

D. 25 ✓

Q4 Arithmetic

What will be difference in population 3 years ago and 2 years ago of a town, whose current population is 190000 and which is increasing at a rate of 25% every year?

A. 23570

B. 23770

C. 24320 ✓

D. 24670

Q5 Arithmetic

The average price of three items of furniture is Rs 16005. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 3201

B. 5335

C. 7469

D. 22407 ✓

Q6 Arithmetic

A person drove at 55 kmph for 6.5 hours, then increased his speed by 15 kmph, and reached the destination in another hour. Find the average speed (in kmph) of the person during the entire journey.

A. 53

B. 59

C. 60

D. 57 ✓

Q7 Arithmetic

The average of 7 numbers is 57. If each number is increased by 5, what will the new average be?

A. 67

B. 57

C. 7

D. 62 ✓

Q8 Arithmetic

A sum, when invested at 20% simple interest per annum, amounts to ₹2160 after 3 years. What is the simple interest (in ₹) on the same sum at the same rate in 1 year?

A. 270 ✓

B. 1080

C. 540

D. 135



Q9 Arithmetic

The population of a village was 140000. It increased by 15% in the first year and increased by 20% in the second year. Its population after two years is _____.

A. 193200



B. 161000

C. 189000

D. 168000

Q10 Arithmetic

A person drove at 71 kmph for 6.5 hours, then increased his speed by 15 kmph, and reached the destination in another hour. Find the average speed (in kmph) of the person during the entire journey.

A. 69

B. 75

C. 73



D. 70

Q11 Arithmetic

Manav's average earning per month in the first three months of a year was ₹24328. In April, his earning was 50% more than the average earning in the first three months. If his average earning per month for the whole year is ₹76867, then what will be Manav's average earning (in ₹) per month from May to December?

A. 101621

B. 101619

C. 101614

D. 101616

**Q12 Arithmetic**

In a box, the average weight of dozen apples is 750 g. If 5 apples each of weight of 600 g are added, what would be the new average weight? (Up to one decimal place)

A. 750.35 g

B. 750.8 g

C. 705.325 g

D. 705.8 g

**Q13 Arithmetic**

During sale, Raghav bought a notebook marked for ₹100 at 49% discount and a pen marked for ₹105 at 40% discount. How much (in ₹) did he save due to sale?

A. 92

B. 94

C. 90

D. 91

**Q14 Arithmetic**

The area of a square plot is 32041 m^2 . The length of each side of the plot (in m) is:

A. 177

B. 179



C. 157

D. 199

Q15 Arithmetic

The smallest natural number which is divisible by 9, 6, 72 and 76 is:

A. 1327

B. 1368



C. 1338

D. 1359

Q16 Arithmetic

Sakshi invested a sum of ₹8400 at 5% per annum compound interest, compounded annually. If she received an amount of ₹9261 after n years, the value of n is:

A. 3

B. 2.59999990463257

C. 1

D. 2

**Q17 Arithmetic**

The smallest 1-digit number to be added to the 6-digit number 623058 so that it is completely divisible by 11 is:

A. 4



B. 8

C. 6

D. 1



Q18 Arithmetic

If the radius of the base of a right circular cylinder is decreased by 12% and its height is increased by 175%, then what is the percentage increase (closest integer) in its volume?

A. 1.13



B. 0.91

C. 0.92

D. 1.22

Q19 Arithmetic

The smallest 1-digit number to be added to the 6-digit number 726490 so that it is completely divisible by 11 is:

A. 3

B. 5



C. 4

D. 8

Q20 Arithmetic

The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 243, determine the number of boys participating in the sports.

A. 1235

B. 1190

C. 1245

D. 1215

**Q21 Arithmetic**

The areas of three adjacent faces of a solid cuboid are 27 cm², 232 cm² and 174 cm². What is the volume (in cm³) of the cuboid?

A. 918

B. 1044



C. 1115

D. 1059

Q22 Arithmetic

A shopkeeper marks an article at ₹x and offers a discount of 20% on it. He sells it for ₹351 after charging VAT of 25% on the discounted price. What is the value of ₹ x?

A. ₹500

B. ₹300

C. ₹351



D. ₹600

Q23 Arithmetic

A shopkeeper lists the price of a fan at 20% above its cost price and offers a 10% discount on its list price. If he earns a profit of ₹135, then what is the list price (in ₹) of the fan?

A. 2067

B. 2025



C. 2242

D. 1929

Q24 Arithmetic

A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 725 grams for 1000 grams. What is his profit percentage (rounded off to 2 decimal places)?

A. 38.02

B. 39.3

C. 37.93



D. 40.58

Q25 Arithmetic

850 gm of honey solution has 40% honey in it. How much honey should be added to make it 50% in the solution?

A. 90 gm

B. 170 gm



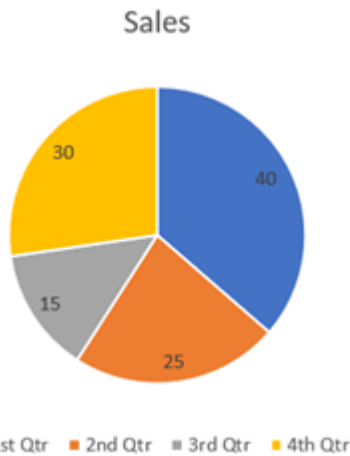
C. 141 gm

D. 212 gm



Q26 Arithmetic

The pie-chart shows the data of sales (in percentage) of a company in four quarters. Study the given pie-chart and answer the question that follows.



If the total production in a year is 4200 units, then the difference in sales in the 2nd and 4th quarters is (in units):

A. 210



B. 180

C. 200

D. 190

Q27 Arithmetic

Find the value of $\left[(27 \div 9) \times \left\{ \frac{80}{8} + \frac{16}{2} \times (5 - 3) \right\} \right]$

A. 63

B. 82

C. 81

D. 78

**Q28 Arithmetic**

Which number should replace both the question marks in the following equation?

$$\frac{?}{12} = \frac{363}{?}$$

A. 69

B. 66



C. 75

D. 56



Q29 Arithmetic

$$\frac{1}{5} + \frac{2}{5} + \frac{4}{10} + \frac{4}{5} - 1 =$$

A. $\frac{17}{10}$

B. $\frac{12}{10}$

C. $-\frac{2}{10}$

D. $\frac{8}{10}$ 

Q30 Arithmetic

Find the value of $\left[(72 \div 3) \times \left\{ \frac{88}{4} + \frac{19}{1} \times (8 - 7) \right\} \right]$

A. 998

B. 984 

C. 987

D. 991

Q31 Arithmetic

Find the value of $\left[(60 \div 6) \times \left\{ \frac{16}{2} + \frac{15}{3} \times (6 - 3) \right\} \right]$

A. 224

B. 221

C. 242

D. 230 

Q32 Arithmetic

The capacity of a hemispherical bowl is $19,404 \text{ cm}^3$. What is its curved surface area (in cm^2)?

(Take $\pi = \frac{22}{7}$)

A. 1386

B. 7272

C. 2772 

D. 4158



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Q33 Arithmetic

If x varies inversely as $y^3 - 1$ and is equal to 5 when $y = 3$, find x when $y = 7$.

A. $\frac{65}{171}$



B. $\frac{67}{171}$

C. $\frac{66}{172}$

D. $\frac{65}{172}$

Q34 Arithmetic

Find the value of $\left[(15 \times 4) \times \left\{ 6 \div 6 \times \frac{(15 - 11)}{2} \right\} \right]$

A. 136

B. 101

C. 120



D. 126

Q35 Arithmetic

The price (per litre) of petrol increases by 80%. By what percent should its consumption be reduced such that the expenditure on it increases by 35% only?

A. 75%



B. 74%

C. 70%

D. 72%



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