1. What % of 2 hrs is 80 min
   a) 77  b) 67  c) 37  d) 47

2. Average age of 10 students increased by 2 when two students with age 10 and 12 leaves and two new students joins the group. What is the average age of the two new students
   a) 22  b) 42  c) 21  d) 34

3. \(2A = \frac{3}{5}\) B= \(\frac{4}{3}\) C find A:B:C
   a) 6:2:1  b) 6:29:9  c) 6:20:1  d) None

4. A is thrice as old as B. After 5 years A’s age is twice of B’s age hence find the age of A
   a) 12  b) 15  c) 10  d) 18

5. What is the mean proportional between 9 and 25
   a) 15  b) 20  c) 12  d) 16

6. In a 10 kg mixture 20% is salt, for the salt to be 10% how much water should be added
   a) 10  b) 15  c) 12  d) 20

7. The simple interest on a certain sum of 5% per annum for 3 years and 4 years differs by Rs 42. The Sum is
   a) 420  b) 840  c) 640  d) 720
8. If 4 men or 6 boys can finish a work in 20 days how long will 6 men and 11 boys take to finish the same work.

4 men = 6 boys = 20 days

6 men = 11 boys = ?

a) 10  b) 8  c) 6  d) 12

9. How many cubes each of edge 3cm can be made out from a cube of edge 15cm

3 cm cubes = 15 cm cubes

a) 25  b) 125  c) 110  d) 75

10. What is the product of two odd primes

a) 10  b) 15  c) 16  d) 45

11. What is the sum of the prime numbers between 100 and 150

12. A, B and C can do a work in 6, 8 and 12 days respectively. Doing that work together they get an amount of Rs 1350. Then Share of B in the amount is

A = 6 days, B = 8 days, C = 12 days

1350 = B

a) 250  b) 450  c) 650  d) 350

13. Rohit earns an interest of Rs 1656 for the third year and Rs 1440 for the second year on the same sum. Find the rate of compound interest

1656 for 3 years, 1440 for 2 years

a) 10%  b) 8%  c) 15%  d) 20%

14. The perimeter of a rhombus is 40 cm, the length of its smaller diagonal is 12 cm. The length of the larger diagonal is

40 cm, smaller diagonal = 12 cm

a) 16  b) 14  c) 17  d) 18

15. A sum of Rs 13.50 is made by 38 coins which are either 50 paise or 25 paise. Find the number of 25 paise coins

13.50, 50 paise, 25 paise

a) 20  b) 16  c) 22  d) 28

16. What will be difference in the compound interest on Rs 50000 at 12% for one year when the interest is paid yearly and half yearly

50000/- 12%, yearly, half yearly

a) 180  b) 160  c) 185  d) 140
17. If the price of mangoes is decreased by 40% one could get 32 more oranges for Rs 120 then find the original price of each mango.

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- a) 6
- b) 6.25
- c) 5.75
- d) 5

18. A camp of 3000 soldiers has provisions for 60 days. After 15 days, how many soldiers must leave so that the provisions may last for 75 days?

A camp of 3000 soldiers has provisions for 60 days. After 15 days, how many soldiers must leave so that the provisions may last for 75 days?

- a) 1400
- b) 1600
- c) 1200
- d) 180

19. The product of two number is 2028 and their HCF is 13 then the number of such pairs are:

The product of two number is 2028 and their HCF is 13 then the number of such pairs are:

- a) 1
- b) 0
- c) 2
- d) 3

20. It today is Tuesday what day will it be after 57 days?

It today is Tuesday what day will it be after 57 days?

- a) Tuesday
- b) Wednesday
- c) Thursday
- d) Monday

21. What is the unit digit of $7^{105}$?

What is the unit digit of $7^{105}$?

- a) 7
- b) 9
- c) 3
- d) 1

22. Find the value of $4 - \frac{5}{1+\frac{1}{3+\frac{1}{2+\frac{1}{x}}}}$.

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- a) $\frac{1}{8}$
- b) $\frac{1}{6}$
- c) 6
- d) 8

23. The third proportional to $x^2 - y^2$ and $x - y$ is:

The third proportional to $x^2 - y^2$ and $x - y$ is:

- a) $x + y$
- b) $x - y$
- c) $\frac{x+y}{x-y}$
- d) $\frac{x-y}{x+y}$

24. A man completes $\frac{5}{8}$ of a job in 10 days. At the rate how many more days will it take him to finish the job?

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- a) 6
- b) 12
- c) 10
- d) 14
25. What annual payment will discharge a debt of Rs.1025 due in 2 years at the rate of 5% compound interest 

26. Walking at \( \frac{5}{6} \) of its usual speed, a train 10 minutes late. Find its usual time to cover the journey 

27. If the radius of a circle is increased by 75% then its circumference will increase by 

28. Four persons are chosen at random from a group of 3 men, 2 women and 4 children. The chance that exactly 2 of them are selected being 1 man and 1 child. 

29. In what ratio much water be mixed with milk to gain 20% by selling the mixture at cost price 

30. If Rs.64 amounts to Rs.83.20 in 2 years, what will Rs.86 amount to in 4 years at the same rate percent per annum? 

31. A number when 35 is subtracted from it, reduces to its 80 percent. What is four-fifth of that number? 

32. A man bought toffees at 3 for a rupee. How many for a rupee must he sell to gain 50%?
33. If the ratio which is equal to 3 : 4 if the antecedent is 12, then the consequent is a) 24 b) 16 c) 20 d) 8

34. A sum of money is sufficient to pay A’s wages for 21 days and B’s wages for 28 days. The same money is sufficient to pay the wages of both for A - 21 days B - 28 days. If the money is sufficient to pay the wages of A and B for x days, a) 18 b) 12 c) 10 d) 8

35. The value of \( \frac{3.6 \times 0.48 \times 2.50}{0.12 \times 0.09 \times 0.5} \) is a) 80 b) 800 c) 8 d) 1/8

36. When the numerator of a fraction increases by 4, the fraction increases by \( \frac{2}{3} \). The denominator of a fraction is a) 5 b) 4 c) 6 d) 3

37. What will be the least number which when doubled will be exactly divisible by 12, 13, 21 and 30 a) 2730 b) 5460 c) 1365 d) 2360

38. In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is a) 39 b) 35 c) 44 d) 41

39. \( \frac{1}{4} \) of a tank holds 135 litres of water. What part of the tank is full if it contains 180 litres of water a) 1/2 b) 1/3 c) 1/5 d) none

40. \( \sqrt[3]{0.000064} \) a) 4 b) 2 c) 8 d) 16
41. The population of a town is 10000 now and was 8000 two years ago. If it grows at the same rate. What will it be 2 year hence?

\[ \text{Population now} = 10000 \]
\[ \text{Population 2 years ago} = 8000 \]
\[ \text{Growth rate} = \frac{10000 - 8000}{2} = 1000 \text{ per year} \]

\[ \text{Population after 2 years} = 10000 + 2 \times 1000 = 12000 \]

a) 11000  b) 12500  c) 11500  d) 12000

42. A wheels rotates 2500 times covering a distance of 5.5km. find the diameter of the wheel

\[ \text{Number of rotations} = 2500 \]
\[ \text{Distance covered} = 5.5 \text{km} = 5500 \text{m} \]
\[ \text{Distance per rotation} = \frac{5500}{2500} = 2.2 \text{m} \]
\[ \text{Diameter} = 2.2 \times \frac{22}{7} \]
\[ \text{Diameter} = \frac{46.4}{7} \approx 6.63 \text{cm} \]

a) 35cm  b) 20cm  c) 30cm  d) 25cm

43. The cost price of an item is two – third of its selling price. What is the gain/loss per cent on that time

\[ \text{Cost price} = \frac{2}{3} \times \text{Selling price} \]
\[ \text{Gain or Loss} = \frac{\text{Selling price} - \text{Cost price}}{\text{Cost price}} \times 100 \]
\[ \text{Gain or Loss} = \frac{\frac{3}{2} - 1}{\frac{2}{3}} \times 100 = \frac{1}{2} \times 150 = 75\% \]

a) 50%  b) 75%  c) 125%  d) 25%

44. Girish started a business investing Rs. 45,000. After 3 Months, Vijay Joined him with a capital of Rs. 60,000. After another 6 Month, Ankush Joined them with a capital of Rs. 90,000. At the end of the year, they made a profit of Rs. 16,500. What is Girish’s share of profit?

\[ \text{Profit} = \text{Rs. 16,500} \]
\[ \text{Ratio of investments} = 45000 : 60000 : 90000 \]
\[ \text{Ratio of profits} = 45000 : 60000 : 90000 = 3 : 4 : 6 \]
\[ \text{Girish’s share} = \frac{3}{13} \times 16500 = 3300 \]

a) 3300  b) 2200  c) 6600  d) 1100

45. A man can row upstream at 8km/hr and downstream at 13 km/hr. the speed of the stream will be

\[ \text{Speed of upstream} = 8 \text{km/hr} \]
\[ \text{Speed of downstream} = 13 \text{km/hr} \]
\[ \text{Speed of stream} = \frac{13 - 8}{2} = 2.5 \text{km/hr} \]

a) 2.5  b) 10.5  c) 11.5  d) 4.5

46. When \(2^{31}\) is divided by 5 the reminder is

\[ 2^{31} \]
\[ \text{Remainder} = 2 \]

a) 2  b) 0  c) 1  d) 3

47. The probability of a sure undefined event is

\[ \text{Sure event} = 1 \]
\[ \text{Probability} = 1 \]
\[ \text{Undefined event} = ? \]
\[ \text{Probability} = \text{Infinity} \]

a) 0  b) 1  c) Infinity  d) none

48. If \(x = 7 - 4 \sqrt{3}\) then the value of \(x + \frac{1}{x}\) is?

\[ x = 7 - 4 \sqrt{3} \]
\[ \frac{1}{x} = \frac{1}{7 - 4 \sqrt{3}} = \frac{7 + 4 \sqrt{3}}{49 - 48} = 7 + 4 \sqrt{3} \]
\[ x + \frac{1}{x} = 7 - 4 \sqrt{3} + 7 + 4 \sqrt{3} = 14 \]

a) 8\(\sqrt{3}\)  b) 14  c) 14 - 8\(\sqrt{3}\)  d) 28
49. A group of students decided to collect as many paise from each member of group as is the number of members. If the total collection amounts to Rs. 59.29, the number of the member is the group is?

A) 57  b) 67  77  d) 87

50. The ratio of the speed of the train A and B is 3 : 4 in order to reach a destination A takes 30m in more than B. What is the time taken by A

a) 1 hr  b) 1 ½ hrs  c) 2 hrs  d) 50 minutes