

**Q1:** Which of the following decimal numbers should replace the question mark?

$$0.4 + \dots ? \dots = 1$$

- A) 0.4      B) 0.5      **C) 0.6**      D) 0.7

**Solution:**

$$0.4 + \dots ? \dots = 1 \Rightarrow ? = 1 - 0.4 = 0.6$$

**Answer: C**

**Q2:** Which of the following number is both an even and a prime number?

- A) 2**      B) 4      C) 0      D) 6

**Solution:**

2 is both an even and a prime number

**Answer: A**

**Q3:**  $\frac{1}{4} + 0.25 = ?$

- A)  $\frac{3}{2}$       B)  $\frac{3}{4}$       C)  $\frac{1}{4}$       **D)  $\frac{1}{2}$**

**Solution:**

$$\frac{1}{4} + 0.25 = \frac{1}{4} + \frac{25}{100} = \frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$$

**Answer: D**

**Q4:**  $4 + 4 \times 4 - 4 \div 4 = ?$

- A) 19**      B) 17      C) 15      D) 12

**Solution:**

$$4 + 4 \times 4 - 4 \div 4 = 4 + 16 - 1 = 19$$

**Answer: A**

**Q5:** There are two numbers whose H.C.F. and L.C.M. are equal.

Which of the following are these numbers?

- A) 2 and 4      B) 1 and 2  
**C) 8 and 8**      D) 1 and 4

**Solution:**

H.C.F. and L.C.M. of 8 and 8 are equal

**Answer: C**

**Q6:** What is the smallest prime factor of 65?

- A) 1      B) 3      **C) 5**      D) 13

**Solution:**

The smallest prime factor of 65 is 5 which is divisible by 65.

**Answer:**

**C**

**Q7:** Which of the following is equivalent to  $\frac{18}{288}$ ?

- A)  $\frac{9}{48}$       B)  $\frac{3}{16}$       C)  $\frac{1}{8}$       **D)  $\frac{1}{16}$**

**Solution:**

$$\frac{18}{288} = \frac{\overset{2}{\cancel{18}}}{\underset{32}{\cancel{288}}} = \frac{2}{32} = \frac{1}{16}$$

**Answer: D**

**Q8:** Which of the following numbers is the smallest one?

- A) 0.25      B)  $\frac{1}{3}$       C)  $\frac{3}{8}$       **D) %24**

**Solution:**

A) 0.25      B)  $\frac{1}{3} = 0.\bar{3}$       C)  $\frac{3}{8} = 0.375$       D) %24=0.24

**Answer: D**

**Q9:** What is the next number in the given pattern?

1, 6, 61, 616, ?

- A) 6161      **B) 6171**      C) 1616      D) 6611

**Solution:**

**1, 6, 61, 616, ?**  
**1, 6(= 1 + 5), 61(= 1 + 5 + 55),**  
**616(= 1 + 5 + 55 + 555),**  
**?(= 6171 = 1 + 5 + 55 + 555 + 5555)**

**Answer: B**

**Q10:** Rafay has to take a medicine every 15 minutes. He took the first medicine at 11:05. At what time did he take the fourth medicine?

- A) 11:40      **B) 11:50**      C) 11:55      D) 12:00

**Solution:**

**the first medicine at 11 : 05**  
**the second medicine at 11 : 20**  
**the third medicine at 11 : 35**  
**the fourth medicine at 11 : 50**

**Answer: B**

**Q11:** What is the 8th term in the following number sequence?

$$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \dots$$

- A)  $\frac{1}{32}$       B)  $\frac{1}{64}$       C)  $\frac{1}{128}$       **D)  $\frac{1}{256}$**

**Solution:**

$$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \frac{1}{32}, \frac{1}{64}, \frac{1}{128}, \frac{1}{256}$$

**Answer: D**

**Q12:** The age of a bird is 24 years. After how many years the ages of the bird will be triple?

- A) 12      B) 36      **C) 48**      D) 72

**Solution:**

$$24 + x = 3 \times 24 = 72 \Rightarrow x = 72 - 24 = 48$$

**Answer: C**

**Q13:** Which of the following numbers is the smallest one?

- A)  $[(1 \div 2) \div 3] \div 4$
- B)  $(1 \div 2) \div (3 \div 4)$
- C)  $1 \div [(2 \div 3) \div 4]$
- D)  $[1 \div (2 \div 3)] \div 4$

**Solution:**

- A)  $[(1 \div 2) \div 3] \div 4 = \frac{1}{24}$
- B)  $(1 \div 2) \div (3 \div 4) = \frac{1}{2} \div \frac{3}{4} = \frac{1}{2} \times \frac{4}{3} = \frac{2}{3}$
- C)  $1 \div [(2 \div 3) \div 4] = 1 \div \left(\frac{2}{3} \div 4\right) = 1 \div \left(\frac{2}{3} \times \frac{1}{4}\right) = 1 \div \frac{1}{6} = 6$
- D)  $[1 \div (2 \div 3)] \div 4 = \left(1 \div \frac{2}{3}\right) \div 4 = \frac{3}{2} \times \frac{1}{4} = \frac{3}{8}$

**Answer: A**

**Q14:** A painter drains 4 liters of oil from a full 16 liter container. What percent of the oil remains in the container?

- A) 33%
- B) 45%
- C) 50%
- D) 75%

**Solution:**

$$\frac{12}{16} \times 100\% = \frac{3 \times 100}{4} \% = \frac{300}{4} \% = 75\%$$

**Answer: D**

**Q15:**  $\frac{3}{4} + \frac{1 + \frac{1}{2}}{\frac{1}{2}} = ?$

- A)  $\frac{15}{8}$
- B)  $\frac{15}{4}$
- C)  $\frac{5}{4}$
- D)  $\frac{5}{2}$

**Solution:**

$$\frac{3}{4} + \frac{1 + \frac{1}{2}}{\frac{1}{2}} = \frac{3}{4} + \frac{\frac{3}{2}}{\frac{1}{2}} = \frac{3}{4} + \frac{3}{2} \times \frac{2}{1} = \frac{3 + 12}{4} = \frac{15}{4}$$

**Answer: B**

**Q16:** If you save Rs.15 everyday, how much can you save in the month of August?

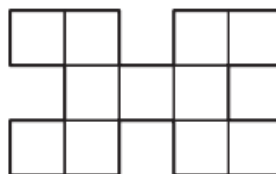
- A) Rs.450
- B) Rs.455
- C) Rs.460
- D) Rs.465

**Solution:**

$$15 \times 31 = \text{Rs.}465$$

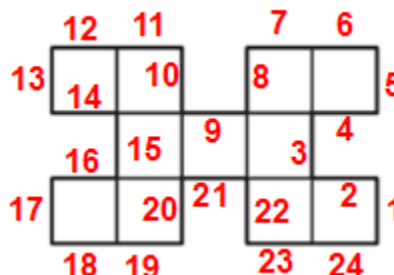
**Answer: D**

**Q17:** What is the perimeter of the following figure if each square is a unit square?



- A) 24
- B) 23
- C) 22
- D) 21

**Solution:**



**Answer: B**

**Q18:** Which of the following is equal to 50 as a sum of two perfect square numbers?

- A)  $36+14=50$                       **B)  $49+1=50$**   
 C)  $16+34=50$                       D)  $26+24=50$

**Solution:**

B)  $49+1=7^2+1^2=50$

**Answer: B**

**Q19:** The number 16200 is written as  $a^2b^3c^4$  in the form of prime factorization.

What is the value of  $ab^2c$ ?

- A) 60**                      B) 72                      C) 80                      D) 90

**Solution:**

$16200 = a^2b^3c^4 = 5^22^33^4 \Rightarrow ab^2c = 5 \times 2^2 \times 3 = 60$

**Answer: A**

**Q20:**  $\frac{1}{10} + \frac{7}{100} + \frac{3}{1000} = ?$

- A) 0.011                                      B) 0.0173  
 C) 0.110                                      **D) 0.173**

**Solution:**

$\frac{1}{10} + \frac{7}{100} + \frac{3}{1000} = 0.173$

**Answer: D**

**Q21:** Waqar and Hisham missed 22 minutes of the movie as they arrived late at the cinema. Complete movie took for 1 hour and 48 minutes.

How much part of the movie did Waqar and Hisham watch?

- A) 2 hours 10 minutes                      B) 1 hour 16 minutes  
**C) 1 hour 26 minutes**                      D) 1 hour 28 minutes

**Solution:**

**1 hour 48 minutes – 22 minutes = 1 hour 26 minutes**

**Answer: C**

**Q22:** The time was 07:00 a.m. when Farhan woke up in the morning. What will be the measurement of the smaller angle between the hour hand and the minute hand?

- A) 120°                      B) 135°                      **C) 150°**                      D) 180°

**Solution:**

Angle between each hour is 30°. Bigger angle is  $7 \times 30 = 210$  and smaller angle is  $360 - 210 = 150^\circ$ .

**Answer: C**

**Q23:** Which of the following operation is not equal to 100?

- A)  $34+46+55 \div (5+6)+9$**                       B)  $4 \times (34-3 \times 3)$   
 C)  $0.4 \times 250$                                       D)  $(16-6) \times 10$

**Solution:**

- A)  $34+46+55 \div (5+6)+9 = 80+55 \div 11+9 = 94$**   
 B)  $4 \times (34-3 \times 3) = 4 \times (34-9) = 4 \times 25 = 100$   
 C)  $0.4 \times 250 = 100$   
 D)  $(16-6) \times 10 = 10 \times 10 = 100$

**Answer: A**

**Q24:** If  $a+b=19$ ,  $b=\frac{c}{4}$  and  $c=28$ , then what is the value of  $a$ ?

- A) 10      **B) 12**      C) 14      D) 16

**Solution:**

$$b = \frac{c}{4} = \frac{28}{4} = 7 \Rightarrow a + b = 19 \Rightarrow a + 7 = 19 \Rightarrow a = 12$$

**Answer: B**

**Q25:** If each decimal in the following sum was increased by  $t$ , the new sum would be 4.22. What is the value of  $t$ ?

$$\begin{array}{r} 0.65 \\ 0.85 \\ 0.38 \\ +0.86 \\ \hline 2.74 \end{array}$$

- A) 0.24      B) 0.29      C) 0.33      **D) 0.37**

**Solution:**

$$4t + 2.74 = 4.22 \Rightarrow 4t = 1.48 \Rightarrow t = 0.37$$

**Answer: D**

**Q26:** What is the number indicated by question mark in the given number pattern?

45, 58, 71, ?, 97

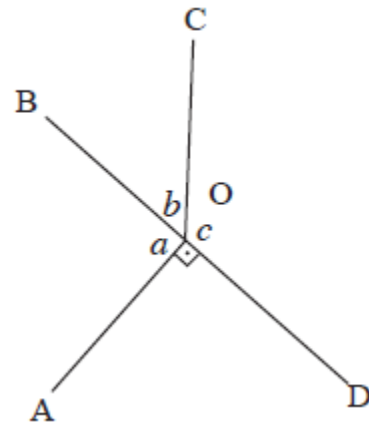
- A) 83      **B) 84**      C) 85      D) 86

**Solution:**

$$45, (45 + 13 =) 58, (58 + 13 =) 71, (71 + 13 = 84) = ?, 97$$

**Answer: B**

**Q27:** If angle AOD is a right angle then what is the value of  $a+b+c$ ?



- A) 270°**      B) 240°      C) 300°      D) 180°

**Solution:**

$$a + b + c + 90^\circ = 360^\circ \Rightarrow a + b + c = 270^\circ$$

**Answer: A**

**Q28:** What is  $K + L$  if;

$$(45 \times 65) \div 25 = K$$

$$(20 \times 62) \div 40 = L$$

- A) 118      B) 128      C) 138      **D) 148**

**Solution:**

$$(45 \times 65) \div 25 = K = \frac{45 \times 65}{25} = 9 \times 13 = 117$$

$$(20 \times 62) \div 40 = L = \frac{20 \times 62}{40} = 31$$

$$K + L = 117 + 31 = 148$$

**Answer: D**

**Q29:** Ahsam started a unique counting in which he added 8 after every digit. If he started with 9 and continued as 9, 17, 25, ... and so on, which of the following number would Ahsam count?

- A) 89**      B) 88      C) 87      D) 86

**Solution:**

$$9, 17, 25, \dots, 8n + 1 \Rightarrow 8 \times 11 + 1 = 88 + 1 = 89$$

**Answer: A**

**Q30:** What is the sum of the digits in the results of the given operation?

$$1 + 101 + 1001 + \dots + \underbrace{1000 \dots 0001}_{50 \text{ Zeros}}$$

- A) 100      **B) 101**      C) 102      D) 104

**Solution:**

There are 51 numbers. The sum of the digits of 50 numbers' starting with 1 and ending with 1 is  $50 \times 2 = 100$  and final answer is  $100 + 1 = 101$ .

**Answer: B**

**Q31:** Which of the following numbers is a multiple of 7?

- A) 165      B) 264      **C) 861**      D) 2160

**Solution:**

$$861 \div 7 = 123$$

**Answer: C**

**Q32:** A child is 1460 days old. What will be his age after one year? (One year has 365 days)

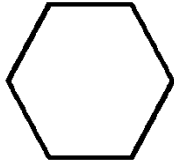
- A) 3 years      **B) 4 years**  
C) 5 years      D) 6 years

**Solution:**

$$1460 \div 365 = 4 \text{ years}$$

**Answer: B**

**Q33:** How many vertices are there in a hexagon?



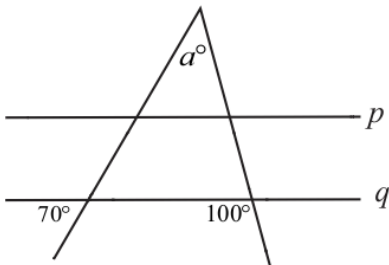
- A) 6      B) 7      C) 9      D) 10

**Solution:**

There are 6 vertices in the hexagon above.

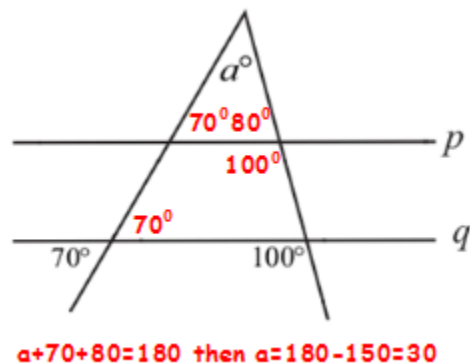
**Answer: B**

**Q34:** In the figure below, line  $p$  is parallel to line  $q$ . What is the value of  $a$ ?



- A) 10      **B) 30**      C) 35      D) 40

**Solution:**

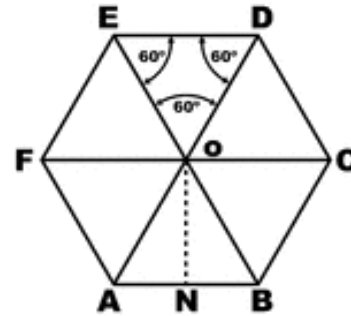


**Answer: B**

**Q35:** Which of the following figure can be obtained by using equilateral triangles?

- A) Regular Hexagon      B) Square  
C) Regular Octagon      D) Rectangle

**Solution:**



**Answer: A**

**Q36:** A bookcase with 6 shelves has 132 books on the top shelf and 216 books on each of the remaining shelves. How many books are there on all 6 shelves of the bookcase?

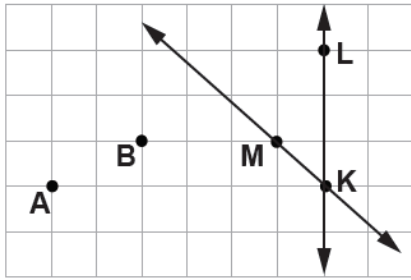
- A) 1212**      B) 1324      C) 1442      D) 1668

**Solution:**

$$132 + 5 \times 216 = 132 + 1080 = 1212$$

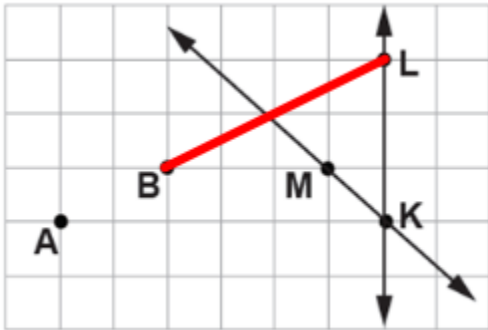
**Answer: A**

**Q37:** Which of the following two points should be joined to make a triangle in the figure below?



- A) A and B                      B) L and K  
C) B and M                      D) L and B

**Solution:**



**Answer: D**

**Q38:** What is the sum of 24 percent of 1200 and 40 percent of 1600?

- A) 288                      B) 640                      C) 828                      D) 928

**Solution:**

$$\frac{24}{100} \times 1200 + \frac{40}{100} \times 1600 = 288 + 640 = 928$$

**Answer: D**

**Q39:** What is the minimum sum of two different natural numbers?

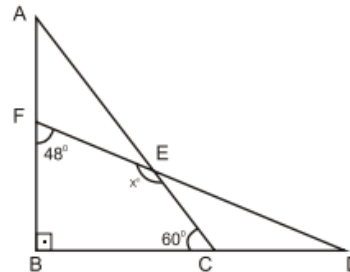
- A) 1                      B) 2                      C) 0                      D) 3

**Solution:**

$$1 + 2 = 3$$

**Answer: D**

**Q40:** What is the measurement of the angle x in the figure given below?



- A) 72                      B) 158                      C) 108                      D) 162

**Solution:**

BCEF is a quadrilateral. So  $48 + 90 + 60 + x = 360$  then  $198 + x = 360$  then  $x = 360 - 198 = 162$

**Answer: D**



**Q41:** Which of the following is the L.C.M. of the sum of first three multiples of 6 and the sum of the first two multiples of 9?

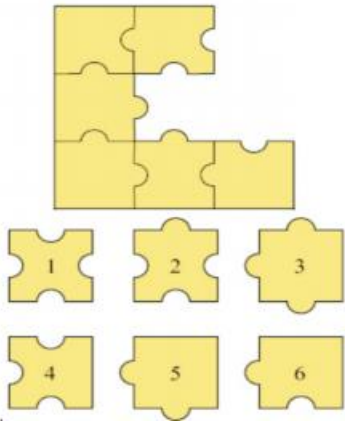
- A) 108      B) 144      C) 196      D) 216

**Solution:**

The sum of first three multiples of 6 is  $6+12+18=36$  and the sum of the first two multiples of 9 is  $9+18=27$ . Then LCM of 36 and 27 is 108

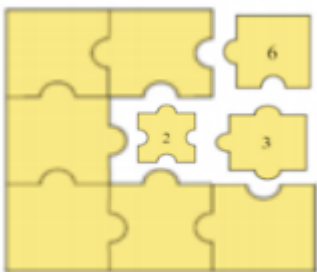
**Answer: A**

**Q42:** Which of the three numbered parts should be placed in the puzzle to complete it?



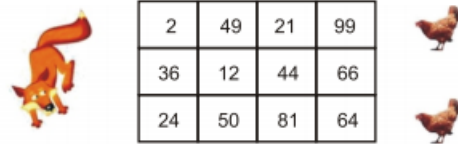
- A) 1, 3 and 4      B) 1, 3 and 6  
C) 2, 3 and 5      D) 2, 3 and 6

**Solution:**



**Answer: D**

**Q43:** A fox needs to jump only on perfect square numbers to reach the chicken. What are these perfect square numbers to be followed? (Order is not important)



- A) 2, 50, 81, 64      B) 36, 49, 81, 64  
C) 36, 49, 81, 99      D) 36, 49, 21, 66

**Solution:**

Following numbers are perfect square numbers.

B)  $36(=6^2), 49(=7^2), 81(=9^2), 64(=8^2)$

**Answer: B**

**Q44:**  $a$  is an integer and  $a\frac{1}{5} = \frac{21}{5}$ , what is the value of  $a$ ?

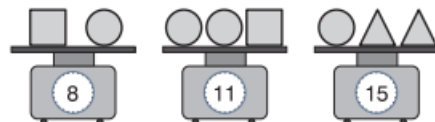
- A) 4      B) 5      C) 6      D) 7

**Solution:**

$$a\frac{1}{5} = \frac{21}{5} = 4\frac{1}{5} \Rightarrow a = 4$$

**Answer: A**

**Q45:** The total weight of the items in each scale is given as 8, 11 and 15 respectively. What is the exact weight of a singular triangular item?



- A) 3      B) 5      C) 12      D) 6

**Solution:** From 2<sup>nd</sup> scale if we exclude 1 circle and 1 square which is equal to 8. Then 1 circle is equal to 3. In 3<sup>rd</sup> scale if we exclude circle then 2 triangles are equal to 12 and one triangle is to 6.

**Answer: D**

**Q46:** There are 750 seats in the school auditorium. If 32% of the students were absent then how many students are there in the auditorium?

- A) 490      B) 500      **C) 510**      D) 535

**Solution:**

If 32% of the students were absent then 68% of the students were present.  $\frac{68}{100} \times 750 = 510$

**Answer: C**

**Q47:** In a school, there are three sections in grade 6. The number of the students in section A are 6 more than section B and 12 less than section C.

What is the total number of the students of all three sections if there are 42 students in section B?

- A) 150**      B) 164      C) 172      D) 180

**Solution:**

42 students are in section B, 48 students are in section A and 60 students are in section C. Then total number of students is  $42+48+60=150$

**Answer: A**

**Q48:** Faheem is 41 years old and he has celebrated all his birthdays. In how many birthday parties was Faheem's age was a prime number?

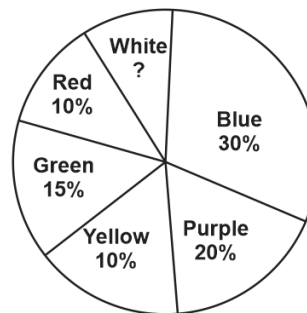
- A) 9      B) 11      **C) 13**      D) 15

**Solution:**

Following ages are prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41

**Answer: C**

**Q49:** The pie chart below shows the favorite colors of a group of pupils.



If 240 pupils like blue color in this group, how many pupils will like white color?

- A) 120**      B) 132      C) 144      D) 154

**Solution:**

$$\frac{\text{White}}{\text{Blue}} = \frac{15}{30} = \frac{1}{2} = \frac{x}{240} \Rightarrow x = 120$$

**Answer: A**

**Q50:** The following table shows the marks of five subjects of a student.

Subject	1st Term	2nd Term
Math	60	75
Science	75	55
Computer	45	65
Social Study	95	100
English	75	80

How much the total average mark of the student increased in the second term?

- A) 2      B) 4      **C) 5**      D) 6

**Solution:**

$$\text{Average in 1st Term: } \frac{60 + 75 + 45 + 95 + 75}{5} = \frac{350}{5} = 70$$

$$\text{Average in 2nd Term: } \frac{75 + 55 + 65 + 100 + 80}{5} = \frac{375}{5} = 75 \text{ the total average}$$

mark of the student increased by 5 in the second term

**Answer: C**