

Q1: What is the sum of the numbers 12, 15, 18 and 25?

- A) 70 B) 66 C) 62 D) 59

Solution:

$$12 + 15 + 18 + 25 = 70$$

Answer: A

Q2: If $A = 19 - 4 \times 4$, then what is the value of $5A$?

- A) 10 B) 15 C) 20 D) 300

Solution:

$$A = 19 - 4 \times 4 \Rightarrow A = 19 - 16 = 3$$

$$5A = 5 \times 3 = 15$$

Answer: B

Q3: Which group contains only prime numbers?

- A) 2, 13, 29, and 47 B) 7, 11, 27, and 43
C) 7, 19, 33, and 41 D) 11, 17, 37, and 39

Solution:

2, 13, 29, and 47 are all prime numbers.

Answer: A

Q4: Which of the following is incorrect?

- A) $\frac{32}{3} = 10\frac{2}{3}$ B) $\frac{19}{5} = 3\frac{4}{5}$
C) $\frac{66}{11} = 6$ D) $\frac{27}{5} = 2\frac{7}{5}$

Solution: $\frac{27}{5} = 2\frac{7}{5}$ (incorrect) $\Rightarrow \frac{27}{5} = 5\frac{2}{5}$ (correct)

Answer: D

Q5: What is the sum of 1 and its half?

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

Solution: $1 + \frac{1}{2} = \frac{3}{2}$

Answer: C

Q6: What is the sum of the first natural number, second prime number and third whole number?

- A) 4 B) 5 C) 6 D) 7

Solution: $1 + 3 + 2 = 6$

Answer: C

Q7: Which of the following numbers is a multiple of 12 and 18?

- A) 72 B) 60 C) 80 D) 124

Solution: $12 \times 6 = 72$ and $18 \times 4 = 72$

Answer: A

Q8: $0.01 \times 0.001 = ?$

- A) 0.000001 B) 0.0001
 C) 10000 D) 0.00001

Solution:

$$0.01 \times 0.001 = \frac{1}{100} \times \frac{1}{1000} = \frac{1}{100000} = 0.00001$$

Answer: D

Q9: $0.25 + 3\frac{1}{4} - \frac{7}{2} = ?$

- A) $\frac{7}{4}$ B) $\frac{1}{4}$ C) 0 D) 1

Solution:

$$0.25 + 3\frac{1}{4} - \frac{7}{2} = \frac{1}{4} + \frac{13}{4} - \frac{7}{2} = \frac{1+13-14}{4} = \frac{0}{4} = 0$$

Answer: C

Q10: $\left(11 + \frac{1}{3}\right) \div \left(7 + \frac{1}{3}\right) = ?$

- A) $\frac{17}{33}$ B) $\frac{11}{3}$ C) $\frac{7}{11}$ D) $\frac{17}{11}$

Solution:

$$\left(11 + \frac{1}{3}\right) \div \left(7 + \frac{1}{3}\right) = \frac{34}{3} \div \frac{22}{3} = \frac{34}{3} \times \frac{3}{22} = \frac{17}{11}$$

Answer: D

Q11: $\left(\frac{144}{21} \div \frac{64}{7}\right) + \frac{1}{3} \times \frac{6}{5} = ?$

- A) $\frac{17}{20}$ B) $\frac{11}{2}$ C) $\frac{23}{20}$ D) $\frac{13}{20}$

Solution:

$$\left(\frac{144}{21} \div \frac{64}{7}\right) + \frac{1}{3} \times \frac{6}{5} = \left(\frac{144}{21} \times \frac{7}{64}\right) + \frac{2}{5} = \frac{3}{4} + \frac{2}{5} = \frac{23}{20}$$

Answer: C

Q12: The H.C.F. of which of the following numbers is different than others?

- A) 12 and 18 B) 30 and 42
 C) 60 and 72 D) 66 and 102

Solution:

- A) HCF (12 and 18) = 6 B) HCF (30 and 42) = 6
 C) HCF (60 and 72) = 12 D) HCF (66 and 102) = 6

Answer: C

Q13: Which one of the following can be the number of the students in a class who can share 165 apples equally?

- A) 9 B) 13 C) 21 D) 33

Solution: $165 \div 33 = 5$

Answer: D

Q14: What is the sum of the remainder, divisor and quotient when 1024 is divided by 13?

- A) 101 B) 107 C) 115 D) 117

Solution:

$$1024 \div 13 = 78 \times 13 + 10 \Rightarrow 78 + 13 + 10 = 101$$

Answer: A

Q15: What is the sum of denominator and numerator of the simplest form of the fraction $\frac{288}{1024}$?

- A) 38 B) 41 C) 44 D) 51

Solution: $\frac{288}{1024} = \frac{9}{32} \Rightarrow 9 + 32 = 41$

Answer: B

Q16: Which of the following numbers has more prime factors than others?

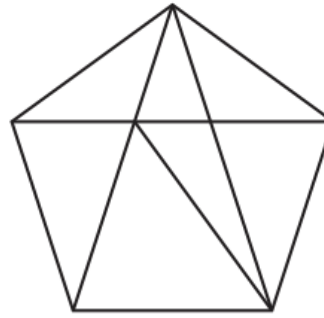
- A) 120 B) 180 C) 210 D) 45

Solution:

A) $120 = 2^3 \times 3 \times 5$ B) $180 = 2^2 \times 3^2 \times 5$
 C) $210 = 2 \times 3 \times 5 \times 7$ D) $45 = 3^2 \times 5$

Answer: C

Q17: How many triangles are there in the following figure?



- A) 7 B) 15 C) 16 D) 17

Solution: There are 15 triangles.

Answer: B

Q18: Which of the following fractions will be equal to $\frac{82}{11}$ after adding 7 to it?

- A) $\frac{4}{11}$ B) $\frac{5}{11}$ C) $\frac{7}{11}$ D) $\frac{3}{11}$

Solution: $\frac{82}{11} - 7 = \frac{82 - 77}{11} = \frac{5}{11}$

Answer: B

Q19: A book seller had some books. He sold 45% of the books and still has 385 books. Originally, how many books did he have?

- A) 315 B) 385 C) 700 D) 1015

Solution: $385 \times \frac{100}{55} = 700$

Answer: C

Q20: $\frac{3}{2} + \frac{3}{4} + \frac{3}{8} = ?$

- A) $\frac{9}{14}$ B) $\frac{13}{2}$ **C) $\frac{21}{8}$** D) $\frac{17}{4}$

Solution: $\frac{3}{2} + \frac{3}{4} + \frac{3}{8} = \frac{12+6+3}{8} = \frac{21}{8}$

Answer: C

Q21: The H.C.F. of two numbers is 36. Which of the following numbers cannot be the other number if one of the numbers is 108?

- A) 72 B) 36 C) 144 **D) 216**

Solution: H.C.F. of 108 and 216 is 108.

Answer: D

Q22: $256 + 128 + 32 + 16 = 4 \times \boxed{\dots\dots\dots}$

What is the unknown number in the operation above?

- A) 108** B) 102 C) 96 D) 84

Solution:

$256 + 128 + 32 + 16 = 4 \times \boxed{\dots\dots} \Rightarrow \boxed{\dots\dots} = \frac{432}{4} = 108$

Answer: A

Q23: The number of right angles inside a rectangle is _____.

- A) 1 B) 2 C) 3 **D) 4**

Solution: A rectangle is a four sided shape with four right angles (90°).

Answer: D

Q24: 48% is equivalent to _____.

- A) $\frac{16}{25}$ **B) $\frac{12}{25}$** C) $\frac{14}{25}$ D) $\frac{8}{25}$

Solution: $\frac{48}{100} = \frac{12}{25}$

Answer: B

Q25: Sana got 24 marks out of 75 in mathematics. What are her percentage marks?

- A) 24 % B) 30 % **C) 32 %** D) 36 %

Solution: $\frac{24}{75} \times 100 = 32\%$

Answer: C

Q26: The dimensions of a rectangle are 28 cm and 7 cm. The length of a side of a square which has the same area with the given rectangle above is _____.

- A) 12 cm **B) 14 cm** C) 15 cm D) 16 cm

Solution:

Area of rectangle = $7 \times 28 = 196 = \text{Area of square} = 14^2$ then the length of a side of a square is 14 cm.

Answer: B

Q27: What percent of the numbers from 1 to 50 (1 and 50 are included) are the factors of 100?

- A) 8 % B) 15 % **C) 16 %** D) 24 %

Solution: The factors of 100 from 1 to 50 are 1, 2, 4, 5, 10, 20, 25 and 50.

$$\frac{8}{50} \times 100 = 16\%$$

Answer: C

Q28: What will be the sum of next two numbers in the following sequence?



- A) 81 **B) 84** C) 87 D) 92

Solution: $37 + 47 = 84$

Answer: B

Q29: The price of 12 ice creams is Rs. 300. What will be the price of 27 ice creams if the rate of each ice cream increased by 4%?

- A) 702** B) 675 C) 728 D) 649

Solution: The price of 12 ice creams is Rs. 300 then the

price of 1 ice cream is 25 Rs. $25 \times \frac{4}{100} = \frac{100}{100} = 1$

then the new price of 1 ice cream is 26 Rs.

$26 \times 27 = \text{Rs. } 702.$

Answer: A

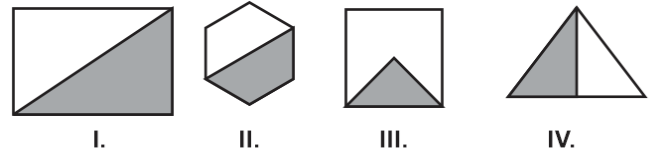
Q30: What is the difference between the greatest and smallest numbers which can be formed by using the digits 8, 5, 7 and 3?

- A) 4878 B) 12331 **C) 5175** D) 4860

Solution: $8753 - 3578 = 5175$

Answer: C

Q31: Which figure(s) has one half shaded?

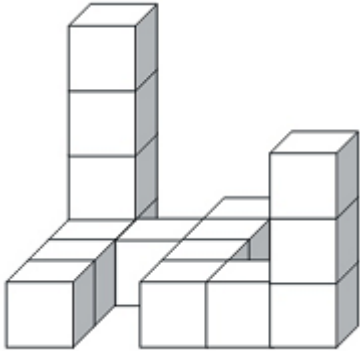


- A) I and III B) I and IV
C) I, II and IV D) All

Solution: I, II and IV

Answer: C

Q32: How many more cubes are needed to complete the shape given below to make a prism?



- A) 63 **B) 64** C) 65 D) 66

Solution: $4 \times 4 \times 5 - 16 = 80 - 16 = 64$

Answer: B

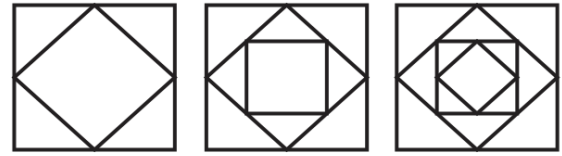
Q33: There are 20 ducks. 10 of these ducks lay an egg every day. The other 10 lay an egg every second day. How many eggs do the 20 ducks lay in a period of 10 days?

- A) 10 **B) 15** C) 20 D) 25

Solution: $10 + 5 = 15$

Answer: B

Q34: How many triangles will be in the 4th shape in the following pattern?



I II III

- A) 16** B) 18 C) 20 D) 22

Solution: 4, 8, 12, 16

Answer: A

Q35: $(3 \times 100) + (4 \times 10) + \left(6 \times \frac{1}{10}\right) + \left(8 \times \frac{1}{1000}\right)$

Which of the following decimals' analysis is given above?

- A) 34.68 **B) 340.608**
C) 34.608 D) 340.680

Solution:

$$= (3 \times 100) + (4 \times 10) + \left(6 \times \frac{1}{10}\right) + \left(8 \times \frac{1}{1000}\right)$$

$$= 300 + 40 + 0.6 + 0.008 = 340.608$$

Answer: B

Q36: The length of the table is 1.3 m, book is 26 cm and the ruler is 500 mm. What is the sum of the length of the all the items in centimeters?

- A) 206 cm** B) 192 cm C) 198 cm D) 200 cm

Solution: $130 + 26 + 50 = 206\text{cm}$

Answer: A

Q37: 3 years ago, the sum of the ages of 3 brother's was 94. What will be the sum of the ages of 3 brother's in 4 years from now?

- A) 101 B) 110 C) 100 **D) 115**

Solution:

Total no. of years 3 years ago and after 4 years from is 7 years for each brother.

For 3 brothers, it will be 21 years in total.

Then total sum of 3 brothers' ages in 4 years from now is $94+21=115$

Answer: D

Q38: If 40% of a number is 4, what will be the 80% of the number?

- A) 4 B) 5 C) 6 **D) 8**

Solution: $x = 4 \times \frac{100}{40} = 10 \Rightarrow 10 \times \frac{80}{100} = 8$

Answer: D

Q39: If a car takes 24 minutes to cover a distance of 15 km , how long will it take to travel 100 km?

- A) 180 min B) 140 min
C) 160 min D) 150 min

Solution: $time = \frac{24 \times 100}{15} = \frac{2400}{15} = 160 \text{ min}$

Answer: C

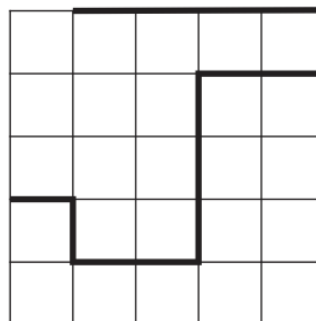
Q40: Hassan has written four fractions: the first 4 non-zero even numbers in denominator and the first 4 prime numbers in numerator in ascending order. What is the sum of the fractions Hassan made?

- A) $\frac{41}{24}$ B) $\frac{49}{24}$ C) $\frac{63}{24}$ **D) $\frac{83}{24}$**

Solution: $\frac{2}{2} + \frac{3}{4} + \frac{5}{6} + \frac{7}{8} = \frac{24+18+20+21}{24} = \frac{83}{24}$

Answer: D

Q41: The figure shows a board where each small square has an area of 16cm^2 . What is the length of the thick black line?



- A) 56** B) 60 C) 72 D) 76

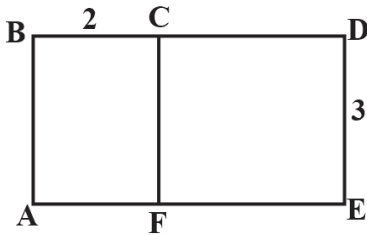
Solution:

Area of each small square is 16 cm^2 then one side of each small square will be 4 cm.

Then the length of the thick black line is $4 \times 14 = 56 \text{ cm}$.

Answer: A

Q42: In the figure below, how much smaller is the perimeter of square FCDE than the perimeter of rectangle ABDE?

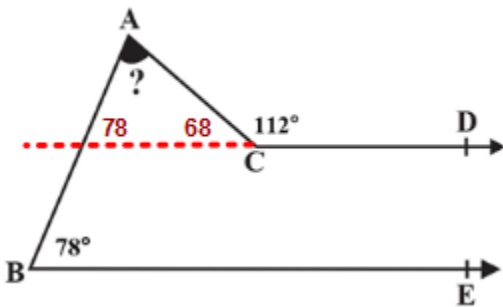


- A) 2 B) 3 **C) 4** D) 7

Solution:
 the perimeter of square FCDE = $4 \times 3 = 12$
 the perimeter of rectangle ABDE = $2(2+3) = 2 \times 5 = 10$
 Difference of perimeters = $10 - 12 = -2$

Answer: C

Q43: What is the measurement of angle BAC if the rays CD and BE are parallel in the figure given below?

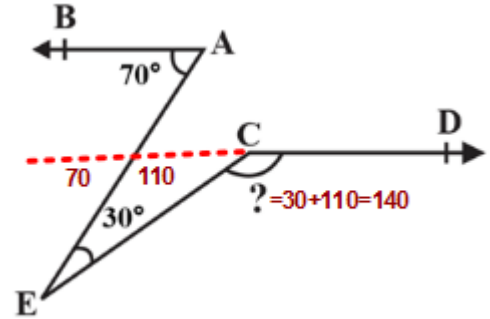


- A) 34** B) 42 C) 47 D) 52

Solution: $?\ = 180 - (78 + 68) = 180 - 146 = 34$

Answer: A

Q44: In the figure given below, the rays AB and CD are parallel. What is the measure of angle ECD?

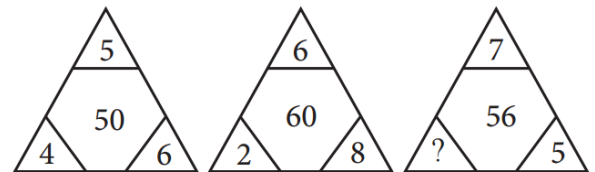


- A) 110 B) 120 **C) 140** D) 150

Solution:

Answer: C

Q45: What is the number indicated by question mark in the following number pattern?

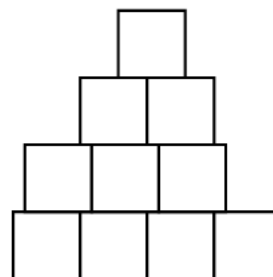


- A) 2 B) 3 **C) 4** D) 6

Solution: $(5 + ?) \times 7 = 56 \Rightarrow ? = 3$

Answer: C

Q46: Raees used 10 squares with side 10 cm to form the shape in the picture given below. What is the perimeter of the shape in cm?



- A) 140 B) 150 **C) 160** D) 170

Solution:
 There will be 16 squares which will make boundary of the figure. So the perimeter of shape = $16 \times 10 = 160\text{cm}$.

Answer: C

Q47: The area of a rectangle is 16cm^2 . Which of the following cannot be the perimeter of the rectangle if its sides are natural numbers?

- A) 20 cm B) 16 cm C) 34 cm **D) 24 cm**

Solution:

Factors of 16 are 1, 2, 4, 8 and 16. So possible perimeters are:

$$P_1 = 2(1+16) = 2 \times 17 = 34\text{cm}$$

$$P_2 = 2(2+8) = 2 \times 10 = 20\text{cm}$$

$$P_3 = 2(4+4) = 2 \times 8 = 16\text{cm}$$

Answer: D

Q48: Ahmed reads $\frac{1}{3}$ of his book, then reads $\frac{1}{2}$ of the rest of the book. There are 35 pages remaining for him to read. What is the total number of the pages of the book?

- A) 175 **B) 105** C) 155 D) 200

Solution:

$$\left[1 - \left(\frac{1}{3} + \frac{2}{3} \times \frac{1}{2} \right) \right] x = 35 \Rightarrow \frac{x}{3} = 35 \Rightarrow x = 105$$

Answer: B

Q49: What is the average of all prime numbers between 40 to 60?

- A) 48 B) 38.6 C) 45 **D) 48.6**

Solution: $\frac{41+43+47+53+59}{5} = \frac{243}{5} = 48.6$

Answer: D

Q50: The average heights of 11 boys and 9 girls are 140 cm and 120 cm respectively. What is the average height of all the students in the class?

- A) 129 **B) 131** C) 133 D) 134

Solution:

$$\frac{11 \times 140 + 9 \times 120}{11 + 9} = \frac{1540 + 1080}{20} = \frac{2620}{20} = 131$$

Answer: B