Q1: Which of the following numbers is **not** an integer?

A) $\frac{2016}{6}$ B) $\frac{2015}{5}$ C) $\frac{2014}{4}$ D) $\frac{2013}{3}$

Q2: $3+2\times\left[\left(-5+2\right)-\left(-7+3\right)\right]-4=?$

A) 0 B) 1 C) 2 D) 4

Q3: Evaluate $\frac{\frac{2}{3}}{2}+\frac{3}{\frac{3}{2}}$

A) $\frac{3}{2}$ B) $\frac{7}{3}$ C) $\frac{3}{5}$ D) $\frac{4}{5}$

Q4: $\frac{\frac{1}{2}+\frac{1}{3}\div\left(\frac{1}{2}+\frac{1}{3}\right)}{0.4}=?$

A) $\frac{1}{5}$ B) $\frac{3}{2}$ C) $\frac{3}{5}$ D) $\frac{9}{4}$

Q5: $14391\div13=?$

A) 1107 B) 1161 C) 1071 D) 1171

Q6: Which of the following is smaller than $\frac{6}{5}$?

A) 1.15 B) 1.20 C) 1.25 D) 1.30

Q7: $\frac{1}{\frac{0.1}{0.11}+\frac{0.3}{0.33}-\frac{0.6}{0.66}}=?$

A) $\frac{11}{3}$ B) $\frac{11}{6}$ C) $\frac{11}{10}$ D) $\frac{6}{11}$

Q8: Find the value of x in the equation $4x+\frac{1}{2}\left(3x-2\right)=\frac{9}{2}x$.

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

Q9: What is the value of $3a+c$ if $\begin{matrix} a-b=1 \\ a+c=7 \\ b-c=2 \end{matrix}$?

A) 8 B) 11 C) 15 D) 17

Q10: Which of the following is an odd number?

A) 101^2+9 B) 102^2+3
C) 102^2+8 D) 105^2+5

Q11: $\frac{4}{0.2}-(0.25)^2+1=?$

A) $\frac{289}{16}$ B) $\frac{331}{16}$ C) $\frac{335}{16}$ D) $\frac{337}{16}$

Q12: $\left(\frac{3}{7}\right)^3=?$

A) $\frac{27}{7}$ B) $\frac{9}{21}$ C) $\frac{27}{343}$ D) $\frac{33}{343}$

Q13: $x-\left[x+\frac{1}{x}\right]+\frac{1}{x}=?$

A) 0 B) $2x$ C) $\frac{x+1}{x}$ D) $\frac{1}{x}$

Q14: What will be replaced with the question mark in the following equation?

$$\sqrt{?-12}=7$$

A) 61 B) 24 C) 36 D) 42

Q15: If the average of "a" and "b" is 12 and the average of "c" and "d" is 13 then which of the following is false?

A) $a+b=24$ B) $c+d=26$
C) $(c+d)-(a+b)=0$ D) $a+b+c+d=50$

Q16: What is the H.C.F. of a and b if both a and b are prime numbers?

A) $a+b$ B) $\frac{a}{b}$ C) $a\times b$ D) 1

Q17: $5 \triangle 3 = 10$
$6 \triangle 7 = 37$
$8 \triangle 2 = 11$
$9 \triangle 11 = ?$

A) 94 B) 88 C) 83 D) 81

Q18: The average of three numbers is m. What will be the average of the numbers if each of them is increased by 12?

A) $12m$ B) $m+12$
C) m D) $m-12$

Q19: If $\frac{4}{5} = \frac{p}{15}$ and $\frac{4}{5} = \frac{20}{m}$, what is the value of $p+m$?

A) 32 B) 34 C) 37 D) 41

Q20: If $\left(\frac{a}{b}\right)^2 = 4$, what is the value of $\left(\frac{b}{a}\right)^4$?

A) 16 B) $\frac{1}{8}$ C) 8 D) $\frac{1}{16}$

Q21: What is the value of x if $\frac{3x}{2} + \frac{5}{4} = \frac{9}{2} + \frac{x}{2}$?

A) $\frac{3}{4}$ B) $\frac{7}{4}$ C) $\frac{11}{4}$ D) $\frac{13}{4}$

Q22: Which of the following proportions is different than others?

A) $\frac{m}{n} = 4$ B) $m:n = 1:4$
C) $\frac{4}{m} = \frac{1}{n}$ D) $\frac{n}{m} = \frac{2}{8}$

Q23: If $a = -3$ then which of the following is the biggest?

A) $-11a$ B) a^3 C) $\frac{99}{a}$ D) $5a^2$

Q24: If $\sqrt{x} = 12$, what is the value of x?

A) 12 B) 24 C) 144 D) 136

Q25: If 25% of A is equal to 1200, what is 40% of $A + 400$?

A) 98 B) 245 C) 280 D) 2080

Q26: $\sqrt{0.01}\left(\sqrt{0.36} + \sqrt{0.16}\right) = ?$

A) $\frac{1}{10}$ B) 1 C) $\frac{1}{\sqrt{10}}$ D) $\sqrt{10}$

Q27: If 11 more than m is 7 less than n, what is m in terms of n?

A) $n + 7$ B) $n - 7$ C) $n - 18$ D) $n - 11$

Q28: Usman had an appointment which is 60 km away from his home at 11:00 a.m. He travelled with an average speed of 80 km/h for the trip and arrived 25 minutes late for the appointment. At what time did he leave his home?

A) 09:40 a.m. B) 10:35 a.m.

C) 10:40 a.m. D) 10:45 a.m.

Q29: The sum of the squares of which of the following pairs is the greatest?

A) 3 and 6 B) 4 and 5
C) 2 and 7 D) 8 and 1

$$\frac{1}{a}+\frac{1}{b}=15$$

Q30: If $\frac{1}{b}+\frac{1}{c}=17$ then what is the value of c ?

$$\frac{1}{a}+\frac{1}{c}=12$$

A) $\frac{1}{13}$ B) $\frac{1}{10}$ C) $\frac{1}{7}$ D) $\frac{1}{6}$

Q31: $(-45)^2-35^2=?$

A) -3250 B) -800
C) 800 D) 3250

Q32: $2\sqrt{21-\sqrt{23+\sqrt{4}}}=?$

A) 8 B) 6 C) 12 D) 10

Q33: Which of the following three numbers whose products should be multiplied by 24 to get a perfect square?

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

Q34: 8 workers can paint a building in 27 days. How many days will it take 18 workers to paint the same building?

A) 10 B) 12 C) 15 D) 18

Q35: If $a^2b=12^2$ and b is an integer, then a is not divisible by _____.

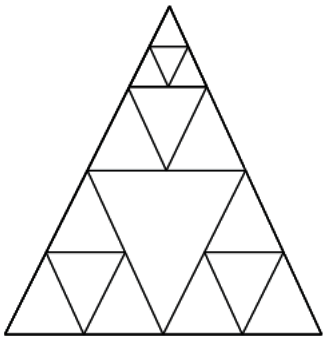
A) 3 B) 4 C) 6 D) 8

Q36: Which of the following problems cannot be solved by using the equation $5x-7=x+17$?

I. 7 less than 5 times a certain number is equal to 17 more than the number. What is the number?
II. The age of Hassan after 17 years will be 7 less than 5 times his present age. What is his age?
III. 5 times 7 less than a certain number is equal to 17 more than the same number. What is the number?

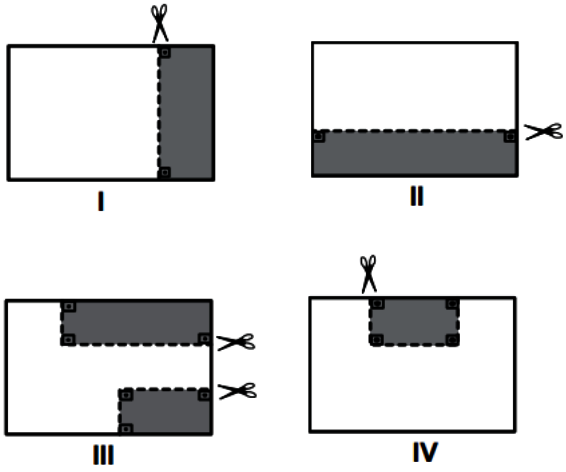
A) Only I B) I and II
C) II and III D) Only III

Q37: What is the number of all possible triangles drawn in the figure given below?



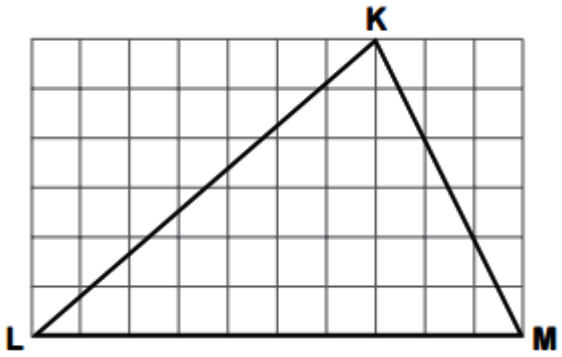
A) 20 B) 21 C) 22 D) 23

Q38: The shaded areas in the figures given below are removed. Which shape has the longest perimeter after the shaded parts are removed?



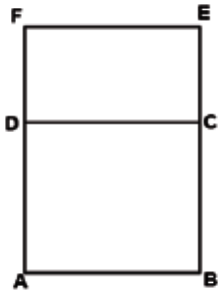
A) I B) II C) III D) IV

Q39: What is the area of the triangle KLM if its height is 42 cm?



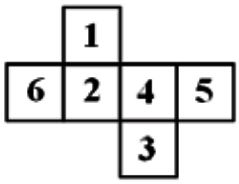
A) 2940 B) 1470 C) 30 D) 60

Q40: In the figure below, the perimeter of the rectangle $ABCD$ is 40 cm and the perimeter of the rectangle $CDEF$ is 32 cm. What is the perimeter of the rectangle $ABEF$ if the length of the side CD is 7 cm?



A) 58 cm B) 62 cm C) 65 cm D) 72 cm

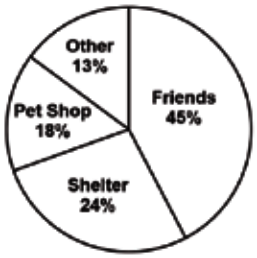
Q41: The net of a cube with numbered faces is shown in the diagram.



Urva correctly adds the numbers on opposite faces of this cube. Which sums does Urva get?

A) 4, 7 and 10 B) 8, 9 and 4
C) 7, 7 and 7 D) 6, 8 and 10

Q42: If 360 of the owners got their cat from a shelter, how many of the owners got their cat from friends according to pie chart?



A) 1500 B) 1350 C) 775 D) 675

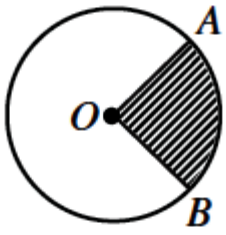
Q43: Find the value of x if $4+\dfrac{12}{2-\dfrac{3}{\dfrac{2-x}{2}}}=8$

A) 8 B) 6 C) -6 D) -8

Q44: Each of 9 students conducted an experiment, and the average time for the 9 experiments was 34 minutes. If the average time for 5 of the experiments was 30 minutes, what was the average time, in minutes, for the other 4 experiments?

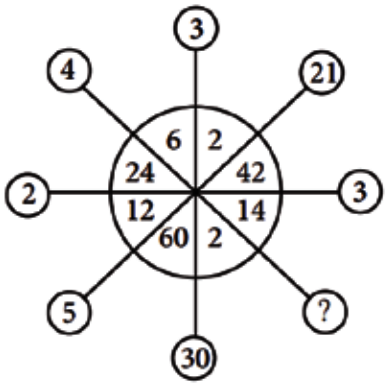
A) 38 B) 38.5 C) 39 D) 39.5

Q45: In the following circle with centre O, the shaded area represents 25% of the area of the circle. What is the size of angle AOB?



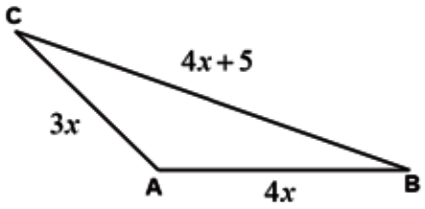
A) 25° B) 75° C) 90° D) 100°

Q46: What is the unknown number indicated by question mark?



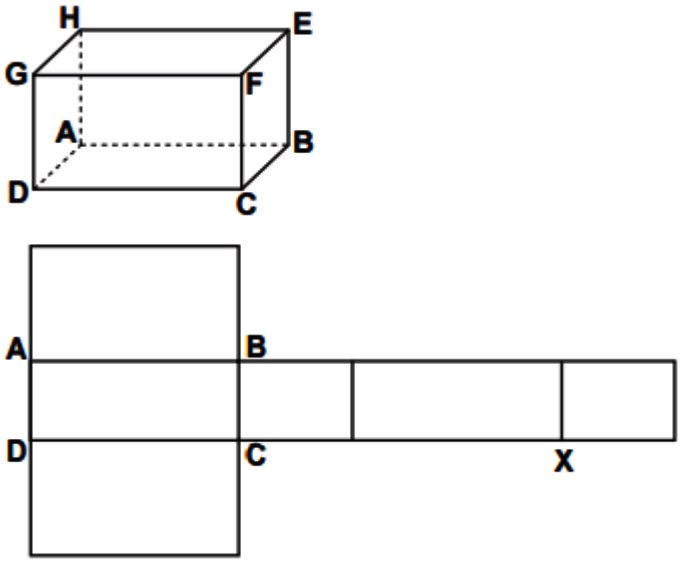
A) 7 B) 14 C) 21 D) 42

Q47: The perimeter of the $\triangle ABC$ below is 82 cm. What is the value of x?



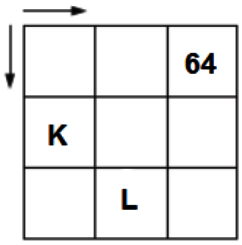
A) 5 B) 6 C) 7 D) 9

Q48: In the figure below, a rectangular prism and its net is given. Which letter will be X?



A) G B) F C) E D) H

Q49: According to the given table below, numbers are increasing by double from left to right and decreasing by half top to down. What is the value of K-L?



A) 16 B) 8 C) 4 D) 0

Q50: x, y and z are three digits.

$$\begin{array}{r} 7\ x\ 2 \\ -\ 4\ 8\ y \\ \hline z\ 7\ 3 \end{array}$$

What is the value of $x + y + z$ according to subtraction?

A) 13 B) 15 C) 17 D) 19