

THIRD InTRa ScHool MaTHEMaTicS of yMplad 2012

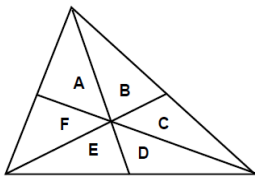
CLASS VI

Solutions

- Q.1 D (31+5) in others one or both is composite numbers
Q.2 A (16triangles of all sizes)
Q.3 D (West)
Q.4 B (12)
Q.5 B (3Kg)
Q.6 B (3)
Q.7 D (150)
Q.8 C
Q.9 C
Q.10 E
Q.11 A (36Feet)
Q.12 D (0.739)
Q.13 C (150 tiles)
Q.14 E (801)
Q.15 E (5)
Q.16 (21)
Q.17 $\frac{5}{18}$, $\frac{20}{72}$ and $\frac{25}{90}$
Q.18 Rahul = 480, Ankit= 800 and Madhu=1120
Q.19 i) 10kg ii) 48 boks
Q.20 (735)
Or
Q.20 Rs.9336

Solutions

- Q.1 D (31+5) in others one or both is composite numbers
Q.2 Number of Triangles



A, B, C, D, E, F, AF, ED, CB, AFE, BCD, FAB,, EDC, DEF, CBA,& ABCDEF =16
Triangles

Q.3 East

Q.4 Numbers are 32, 23, 24, 42, 41, 14, 31, 13, 21, 12, 43and 34 =total 12 ((B)

Q.5 Weight of full bucket=21kg
Weight of half filled bucket =12kg
Weight of half filled water =21 – 12 = 9 kg
Weight of filled water =9 + 9 = 18 kg
So, weight of a empty bucket = 3 kg

Q.6

ANSWER: B

EXPLANATION:

The first multiple of 8 after 800 is 808 and the first multiple of 7 after 800 is 805. A number divisible by both 7 and 8 should be divisible by 56.

The first such number is 840 obtainable by looking at the sequences:

| | |
|-----|-----|
| 808 | 805 |
| 816 | 812 |
| 824 | 819 |
| 832 | 826 |
| 840 | 833 |
| | 840 |

Hence the next multiple of 56 is $840+56 = 896$ and the one after that is $896+56 = 952$. Since $952+56 = 1008 > 1000$, it follows that there are 3 numbers between 800 and 1000 that are divisible by both 7 and 8.

Q.7 Pattern = $1 \times 3 = 3, 2 \times 3 = 6, 3 \times 3 = 9, \dots, 50 \times 3 = 150$ (D)

Q.8 (C)

Q.9 (C)

Q10 (E) 4, the no. is divisible by given other nos. using divisibility test.

$303450 \div 2$ even no.

$303450 \div 3$ as $3+0+3+4+5+0 = 15 \div 3$

$303450 \div 4$ as its last two digits are not divisible by 4

$303450 \div 5$ as 0 is in its unit place.

$303450 \div 6$ as it is divisible by 2 & 3

Q11 9 feet shadow = 6 feet man

$$\begin{aligned} 54 \text{ feet tree shadow} &= \frac{6}{9} \times 54 \\ &= 36 \text{ feet tree (A)} \end{aligned}$$

Q12

$$\begin{aligned} \frac{7}{10} + \frac{3}{100} + \frac{9}{1000} &= 0.7 + 0.03 + 0.009 \text{ (converting each fraction to a decimal)} \\ &= 0.739 \text{ Answer (D)} \end{aligned}$$

Q.13 Area of a rectangular bathroom = $l \times b$

$$= 300 \times 200$$

$$= 60000 \text{ cm}^2$$

Area of a tile = $s \times s$

$$= 20 \times 20$$

$$= 400 \text{ cm}^2$$

$$\text{Number of tiles} = \frac{\text{Area of a rectangular bathroom}}{400} = \frac{60000}{400} = 150 \text{ tiles (C)}$$

Q14 Sum of all digits of 801 = $8+0+1 = 9 \div 3 = \text{Yes}$, (E)

Q15 Let the missing number be x. using the definition for the evaluation of the symbol

, we know that $2 \times x + 1 \times 6 = 16$ or $2x + 6 = 16$ or $2x = 10$ or $x = 5$. Answer: (E)

Section B

Q16. We make a list of the fractions equivalent to $\frac{5}{8}$ by multiplying the numerator and denominator by the same number, namely 2, 3, 4, and so on:

$$\frac{5}{8}, \frac{10}{16}, \frac{15}{24}, \frac{20}{32}, \frac{25}{40}, \frac{30}{48}, \frac{35}{56}$$

Since the numerator and denominator of $\frac{35}{56}$ add to 91 (since $35 + 56 = 91$), then this is the fraction for which we are looking. The difference between the denominator and Numerator is $56 - 35 = 21$.

Q.17 Pen with Rohan = 36

now pens with Rohan = $36 - 26 = 10$

He gave Ravi = 15

$$\text{fraction} = \frac{10}{36} = \frac{5}{18}$$

He gave Reena = 11

$$\text{equivalent fractions} = \frac{20}{72} \text{ and } \frac{25}{90}$$

Q.18 $3+5+7 = 15$. $\frac{3}{15} \times 2400 = 480$, $\frac{5}{15} \times 2400 = 800$, $\frac{7}{15} \times 2400 = 1120$

Q.19 i) Weight of 7 books = 9 kg

$$\text{Weight of 80 books} = \frac{9}{7} \times 80 = 10 \text{ kg}$$

ii) 10 kg wt = 80 books

$$6 \text{ kg wt} = \frac{80}{10} \times 6 = 48 \text{ books}$$

Q.20 Sum of multiples of 7 = $7+14+21+28+35+42+49+56+63+70+77+84+91$
 $+98$
 $=735$

Or

Q.20 cost of 1 refrigerator – Rs .972 5

$$\text{cost of 144 refrigerators} = \text{Rs.}9725 \times 144 = \text{Rs. } 1400400$$

$$\text{cost of 150 T.V. sets} = \text{Rs.}1400400$$

$$\text{cost of 1 T.V. set} = \text{Rs.}1400400 \div 150 = \text{Rs.}9336$$