

Section II

Q. 6

(a)

i) 10, 100, 200, 310 _____ ?

Solve

10, 100, 200, 310, 420

-90

-100

-110

-120

Ans

ii) 3, 7, 23, 95 _____ ?

Solve

3, 7, 23, 95, 479

$\times 2 + 1$

$\times 3 + 2$

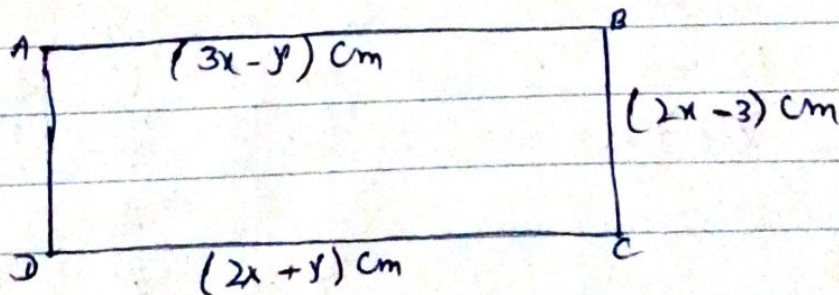
$\times 4 + 3$

$\times 5 + 4$

Ans

(b)

The perimeter of a rectangle is given below 114 cm. Find the area of rectangle.



$$\text{Perimeter} = 114 \text{ cm}$$

$$|AB| = |DC|$$

$$3x - y = 2x + y$$

$$3x - 2x = y + y$$

$$\boxed{x = 2y} \quad \text{--- (1)}$$

$$\text{Perimeter} = |AB| + |BC| + |CD| + |DA|$$

$$= 3x - y + 2x - 3 + 2x + y + 2x + 3$$

$$114 = 9x - 6$$

$$9x = 114 + 6$$

$$x = \frac{120}{9}$$

$$\boxed{x = 13.33}$$

$$(i) \quad x = 2y$$

$$y = \frac{x}{2}$$

$$y = \frac{13.33}{2}$$

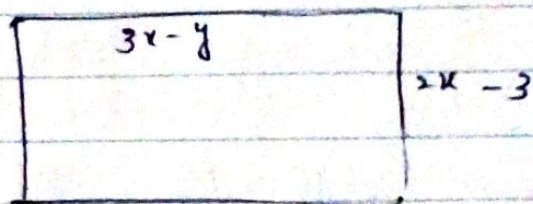
$$\boxed{y = 6.66}$$

$$\Rightarrow 3x - y$$

$$3(13.33) - 6.66$$

$$39.99 - 6.66$$

$$33.33$$



$$\Rightarrow 2x - 3$$

$$2(13.33) - 3$$

$$26.66 - 3$$

$$23.66$$

$$= \text{Area} = L \times W$$

$$= 33.33 \text{ cm} \times 23.66 \text{ cm}$$

$$= 788.58 \text{ cm}^2$$

Ans

(C)

Let

1- Nisha is 15 year older than Romi

$$N = R + 15 \text{ ————— (1)}$$

2- Five years ago, Nisha was 3 times as old as Romi

$$N - 5 = 3(R - 5) \text{ ————— (2)}$$

Subst

Substitute the first equation into 2nd eqn

$$R + 15 - 5 = 3(R - 5)$$

$$R + 10 = 3(R - 5)$$

$$R + 10 = 3R - 15$$

$$10 + 15 = 3R - R$$

$$25 = 2R$$

$$R = \frac{25}{2}$$

$$R = 12.5 \text{ (age of Romi)}$$

$$N = R + 15$$

$$N = 12.5 + 15 = 27.5 \text{ (Nisha's present age)}$$

Ans

(d)

Solve

$$\text{Oranges} = 210$$

$$\text{Apples} = 252$$

$$294 = \text{peas}$$

No of cartons = ?

Prime factorization of each number

$$210 = 2 \times 3 \times 5 \times 7$$

$$252 = 2 \times 2 \times 3 \times 3 \times 7$$

$$294 = 2 \times 3 \times 7 \times 7$$

$$\begin{array}{r|l} 2 & 210 \\ 3 & 105 \\ 7 & 15 \\ \hline 5 & 3 \end{array}$$

Common factor

2 (appears in all three numbers)

3 (appears in all 3)

7 (appears in all 3)

$$\begin{array}{r|l} 2 & 252 \\ 2 & 126 \\ 3 & 63 \\ 3 & 21 \\ 7 & 7 \end{array}$$

Now, find the product of these

Common prime factors

$$2 \times 3 \times 7 = 42$$

$$\begin{array}{r|l} 2 & 294 \\ 3 & 147 \\ 7 & 49 \\ 7 & 7 \\ \hline & 1 \end{array}$$

∴, the biggest possible number of cartons needed is 42.

Ans

Q. 7(a)

price saved = 20%

price on the tag = 80 rupees

Original price of the shirt = ?

Soln

$$\text{Original price} = \frac{80}{100} \times \frac{100}{80}$$

Original price of the shirt = 16 rupees

Ans

(b)

Code for SISTER = ?

Code for BROTHER = Q D G S N Q D

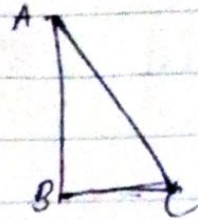
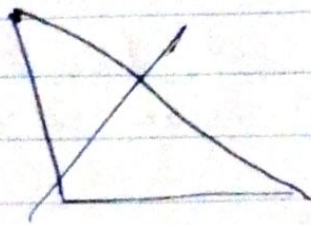
S I S T E R
Q G Q S Q D

A	B	C	D	E
F	G	H	I	J
K	L	M	N	O
P	Q	R	S	T
U	V	W	X	Y
Z				

(C)

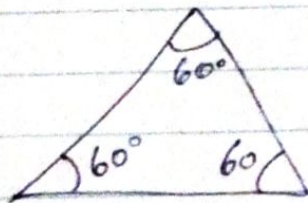
i) Scalene triangle.

A triangle having all the sides and angles unequal.



ii) Equilateral triangle.

A triangle having all the sides are equal ($\angle = 60^\circ$)



iii) Isosceles triangle.

A triangle having 2 sides and angles are equal.



Sum of all angles ($\angle = 180^\circ$)

d)

3 slices contain rawin

Total slices = 8

Probability pick a slice with rawin = ?

Probability = $\frac{\text{Number of favorable outcomes}}{\text{Total number of possible outcomes}}$

$$= \frac{3}{8}$$

$$= 0.375$$

Ans

$$\begin{array}{r} 0.375 \\ 8 \overline{) 30} \\ \underline{24} \\ 60 \\ \underline{56} \\ 4 \end{array}$$