

How many squares

Notes

- Important point :
 - a)The surface inside a figure is called Area.



- b)The length of boundary of any shape is called perimeter .

or

if we add all the sides of any figure we get the perimeter of that figure .

- Formulas
 - (i)Area of square = $a \times a$
 - (ii)Perimeter of square = $4 \times a$
 - (iii)Area of rectangle = $l \times b$
 - (iv)Perimeter of rectangle = $2 \times (l + b)$
- Unit of Area = cm^2 , m^2
- Unit of perimeter = cm , m

Question related to perimeter and area of square

Q .1)Find the area and perimeter of square whose side is given

- (i) 2cm

$$\begin{aligned}\text{Area of square} &= a \times a \\ &= 2\text{cm} \times 2\text{cm} \\ &= 4\text{cm}^2\end{aligned}$$

$$\begin{aligned}\text{Perimeter of square} &= 4 \times a \\ &= 4 \times 2\text{cm} \\ &= 8\text{cm}\end{aligned}$$

- (ii) 4cm

$$\begin{aligned}\text{Area of square} &= a \times a \\ &= 4\text{cm} \times 4\text{cm} \\ &= 16\text{cm}^2\end{aligned}$$

$$\begin{aligned}\text{Perimeter of square} &= 4 \times a \\ &= 4 \times 4\text{cm} \\ &= 16\text{cm}\end{aligned}$$

- (iii) 8cm

$$\begin{aligned}\text{Area of square} &= a \times a \\ &= 8\text{cm} \times 8\text{cm} \\ &= 64\text{cm}^2\end{aligned}$$

$$\begin{aligned}
 \text{Perimeter of square} &= 4 \times a \\
 &= 4 \times 8\text{cm} \\
 &= 32\text{cm}
 \end{aligned}$$

Q.2) Find the area and perimeter of Rectangle whose length and breath is given

(i) $l = 3\text{cm}$ and $b = 2\text{cm}$

$$\begin{aligned}
 \text{Area of rectangle} &= l \times b \\
 &= 3\text{cm} \times 2\text{cm} \\
 &= 6\text{cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Perimeter of rectangle} &= 2 \times (l + b) \\
 &= 2 \times (3\text{cm} + 2\text{cm}) \\
 &= 2 \times 5\text{cm} \\
 &= 10\text{cm}
 \end{aligned}$$

(ii) $l = 4\text{cm}$ and $b = 5\text{cm}$

$$\begin{aligned}
 \text{Area of rectangle} &= l \times b \\
 &= 4\text{cm} \times 5\text{cm} \\
 &= 20\text{cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Perimeter of rectangle} &= 2 \times (l + b) \\
 &= 2 \times (4\text{cm} + 5\text{cm}) \\
 &= 2 \times 9\text{cm} \\
 &= 18\text{cm}
 \end{aligned}$$

(iii) $l = 6\text{cm}$ and $b = 2\text{cm}$

$$\begin{aligned}
 \text{Area of rectangle} &= l \times b \\
 &= 6\text{cm} \times 2\text{cm} \\
 &= 12\text{cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Perimeter of rectangle} &= 2 \times (l + b) \\
 &= 2 \times (6\text{cm} + 2\text{cm}) \\
 &= 2 \times 8\text{cm} \\
 &= 16\text{cm}
 \end{aligned}$$

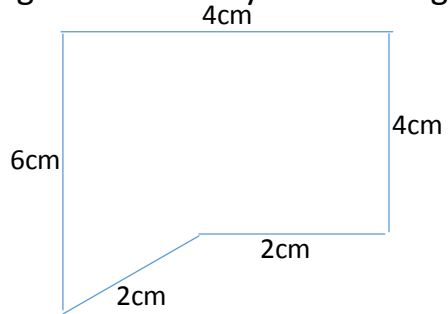
(iv) $l = 3\text{cm}$ and $b = 10\text{cm}$

$$\begin{aligned}
 \text{Area of rectangle} &= l \times b \\
 &= 3\text{cm} \times 10\text{cm} \\
 &= 30\text{cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Perimeter of rectangle} &= 2 \times (l + b) \\
 &= 2 \times (3\text{cm} + 10\text{cm}) \\
 &= 2 \times 13\text{cm} \\
 &= 26\text{cm}
 \end{aligned}$$

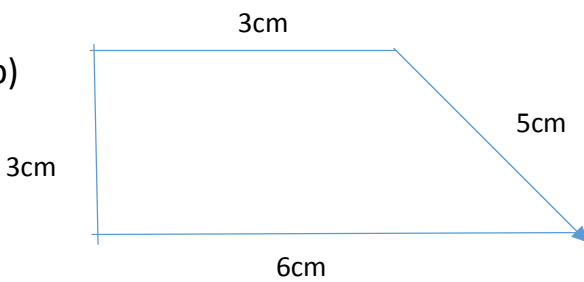
Q.3) Find the length of boundary of following figures.

a)



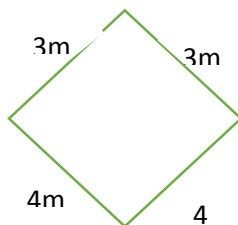
$$\begin{aligned} \text{Ans: perimeter} &= 4\text{cm} + 4\text{cm} + 2\text{cm} + 2\text{cm} + 6\text{cm} \\ &= 18\text{cm} \end{aligned}$$

b)



$$\begin{aligned} \text{Ans: perimeter} &= 3\text{cm} + 5\text{cm} + 6\text{cm} + 3\text{cm} \\ &= 17\text{cm} \end{aligned}$$

c)



$$\begin{aligned} \text{Ans: perimeter} &= 3\text{cm} + 3\text{cm} + 4\text{cm} + 4\text{cm} \\ &= 14\text{cm} \end{aligned}$$