Perimeter

Grade 4: Geometry

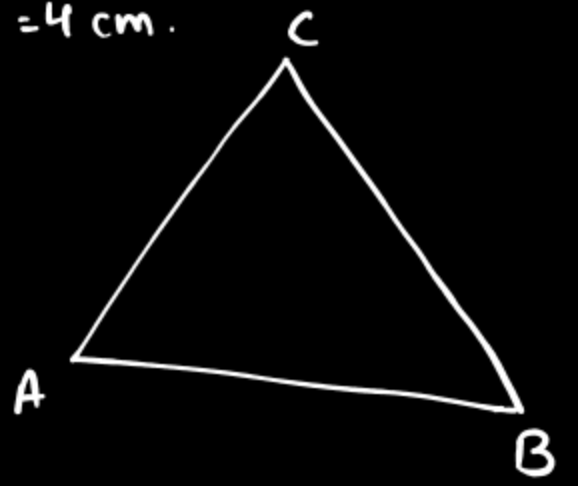
Perimeter of Rectilinear figures.

Rectilinear figure: A plane figure bounded by line segments.

eg: → Triangle, square, rectangle, etc.

Perimeter = **Sum of all sides** of a rectilinear figure.

Q1. In $\triangle ABC$, $AB = 5\,cm$, $BC = 7\,cm$ and $AC = 4\,cm$.
Find the perimeter of $\triangle ABC$.

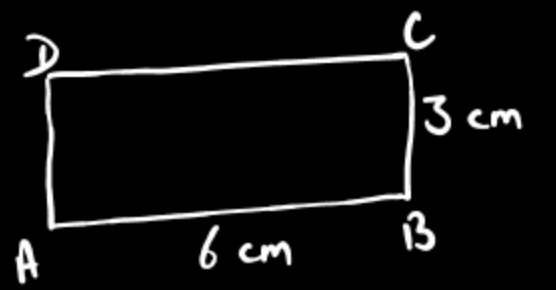


Sol:

$$\text{Perimeter} = AB + BC + AC$$
$$= 5\,cm + 7\,cm + 4\,cm$$
$$= \underline{16\,cm}$$

Q.2. Find the perimeter of rectangle ABCD in which $\underline{AB = 6\,cm}$ and $BC = 3\,cm$.

Sol^n → In a rectangle, opposite sides are equal.

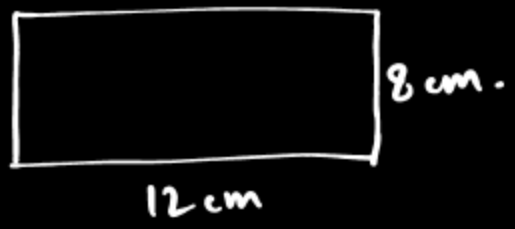


- Therefore, $DC = AB = 6\,cm$
  and $AD = BC = 3\,cm$.

$$\text{Perimeter} = AB + BC + CD + AD$$
$$= 6\,cm + 3\,cm + 6\,cm + 3\,cm = 18\,cm.$$

Perimeter of rectangle = 2×(length + breadth)

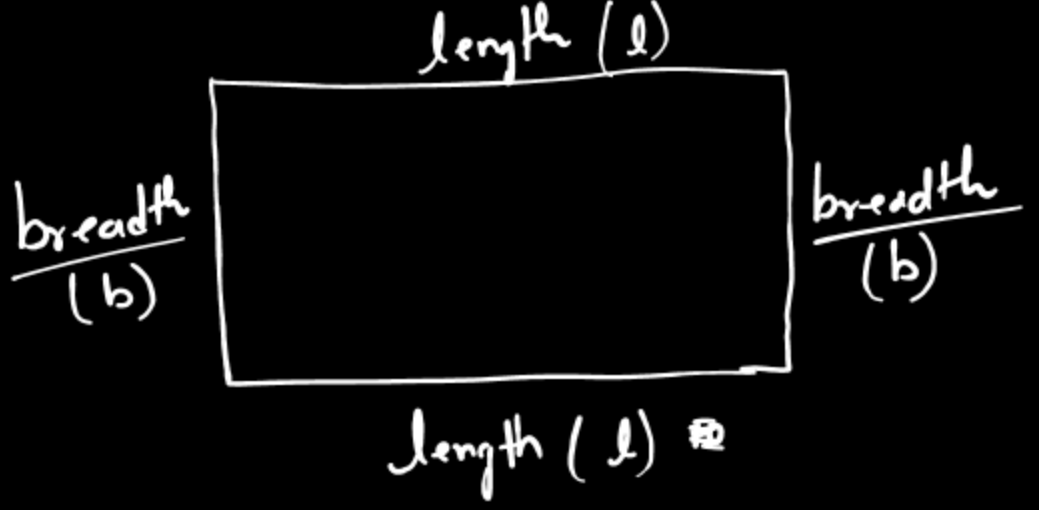
$$\begin{array}{r} {\scriptstyle 1\ \ \ \ } \\ 117 \\ +\ 117 \\ \hline 234 \end{array}$$



Perimeter = 2(8+12) cm
= 2×20 cm.
= 40 cm

Q. Find the perimeter of a rectangular park whose length is 64 metres and breadth 53 metres.

Perimeter = 2(l+b)
= 2(64+53) metres
= 2×(117) = 234 metres

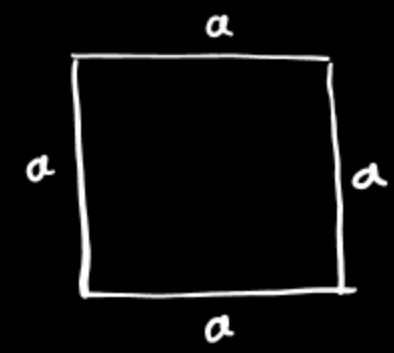


Perimeter = $\underset{\sim}{l} + b + \underset{\sim}{l} + b$

$= 2l + 2b$

Perimeter of rectangle = $2(l+b)$

Perimeter of a Square



Perimeter of a square = a + a + a + a

Perimeter of a sequare = 4 a

Perimeter = 4 x 2 cm = 8 cm.

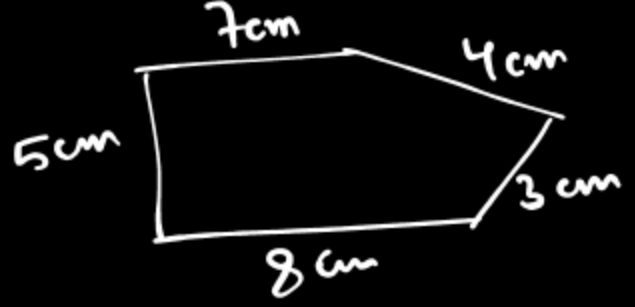
~~Perimetere~~

Q. Find the perimeter of a square of length 6 cm.

Perimeter of Square = 4×6 cm.

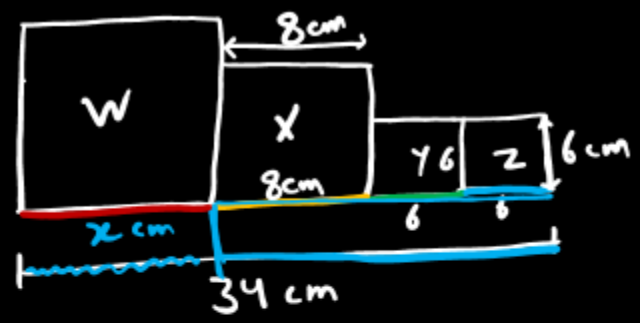
= 24 cm.

Q.



Perimeter = 7cm + 4cm + 5cm + 3cm + 8cm.

= 27 cm



$$x + \underbrace{8 + 6 + 6}_{} = 34$$

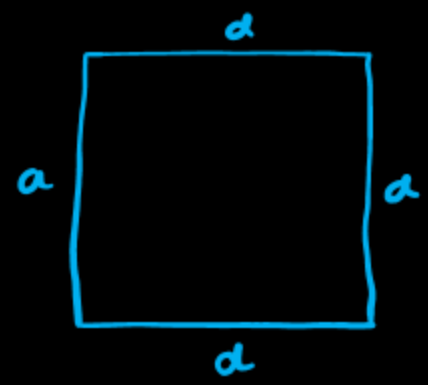
$$x = 34 - 20 = \underline{14\text{ cm}}$$

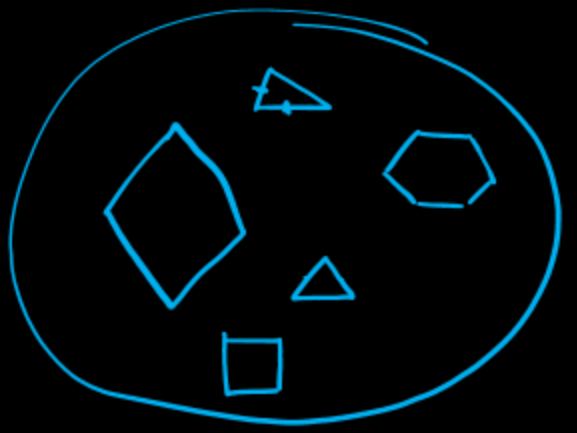
7

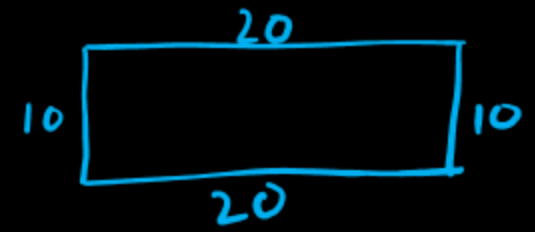
Sum of all sides = 32 m

$4a = 32$

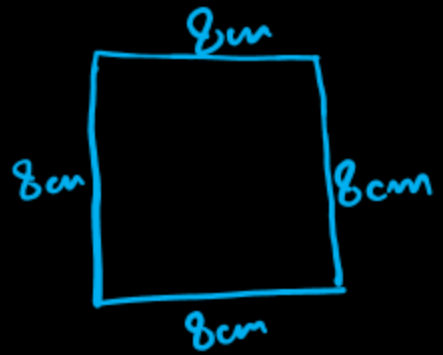
$a = \frac{32}{4} = 8\ m$







Find the perimeter of a square each of whose sides is 8 cm.



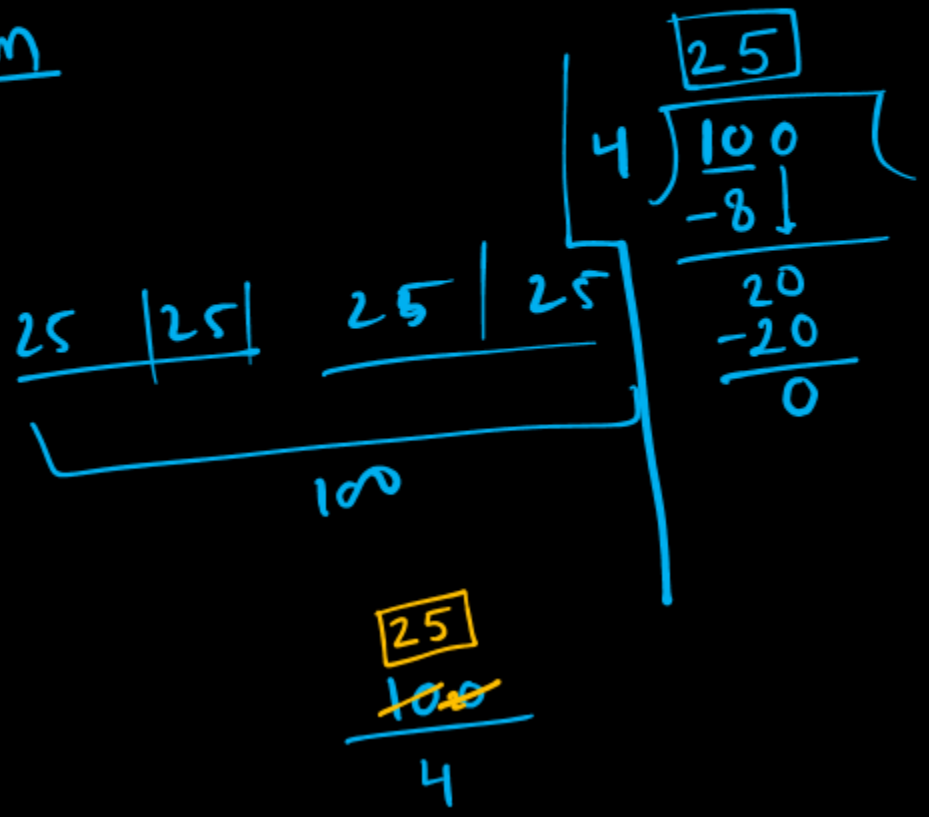
Perimeter = 8 + 8 + 8 + 8

= 8 x 4

= 32 cm

Find the length of each sides of a square whose perimeter is 100 cm.

length : $\left(\frac{100}{4}\right)$ cm = 25 cm

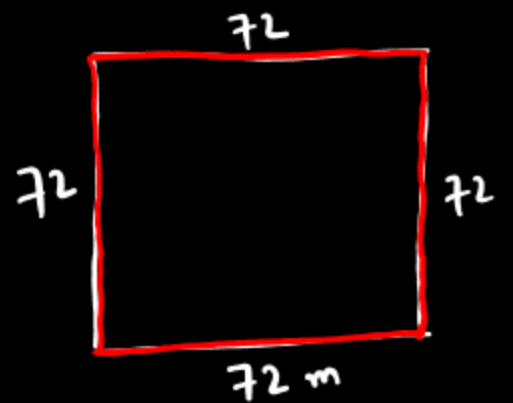


Q. The length of a square field is 72 metres. What length of wire will be needed for fencing all around the field.

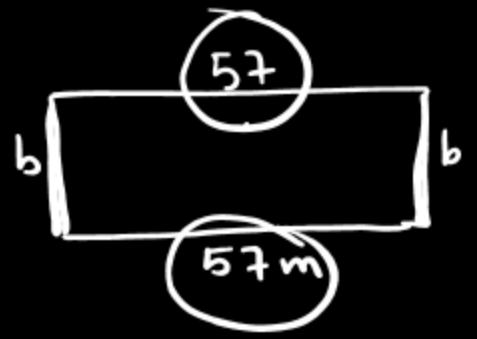
length of wire = perimeter of field (square)

$= 4 \times 72$

$= 288$ m



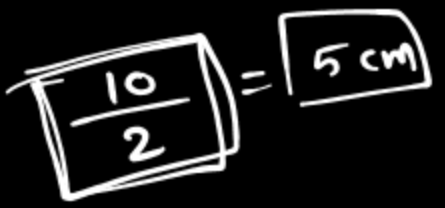
Q. The perimeter of a rectangular football field is 180 metres. If its leg length is 57 metres, find its breadth.



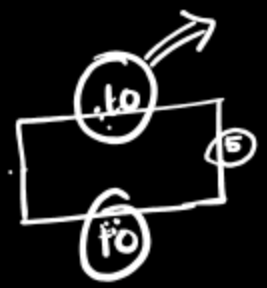
$57 + 57 = 114$

$$\begin{array}{r} 180 \\ -114 \\ \hline 66 \end{array}$$

$$\frac{66}{2} = 33\text{ cm}$$



$$\begin{array}{r} 30 \\ -20 \\ \hline 10 \end{array}$$



$10 + 10 = 20$

30 m = Perimeter

Q. Find the perimeter of a rectangular field whose length is 64 metres. and breadth is 53 metres

Sol:

$$\text{perimeter} = 53+53+64+64 \text{ m}$$

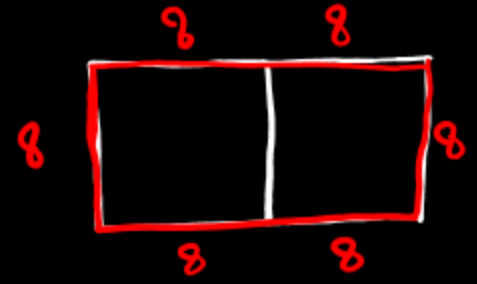
$$= 2\times53 + 2\times64 \text{ m}$$

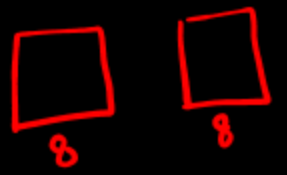
$$= 2(53+64) \text{ m}$$

$$= \underline{234}$$

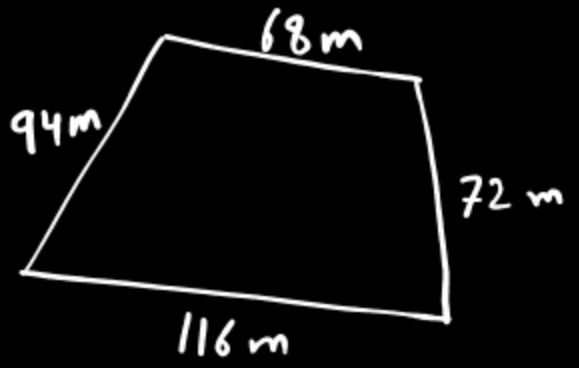
A figure is formed by joining two squares as shown. If the length of each side of the two squares is 8cm. find its perimeter.

Perimeter = $6 \times 8 = \underline{\underline{48}}$ $\underline{\underline{cm}}$





Q. Raj walks around the park, everyday. How far does he walk in 5 rounds of the park.



Sol: ⇒ Distance travelled in one round of park

$= {}^{2}\underline{116} + 094 + 068 + 0\underline{72} \text{ m}$

$= 350 \text{ m}$

Distance travelled in 5 rounds $= 5 \times 350 = 1750 \text{ m}$

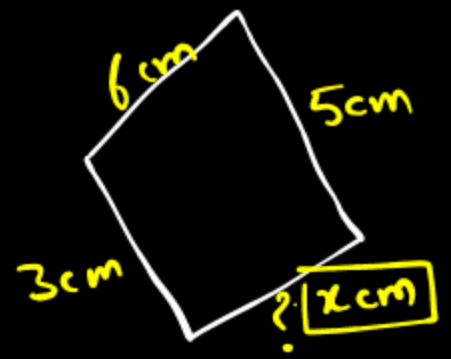
$= 1000 \text{ m} + 750 \text{ m}$

$= 1 \text{ km } 750 \text{ m}$

1000 m = 1 km

Q. Find the missing length:

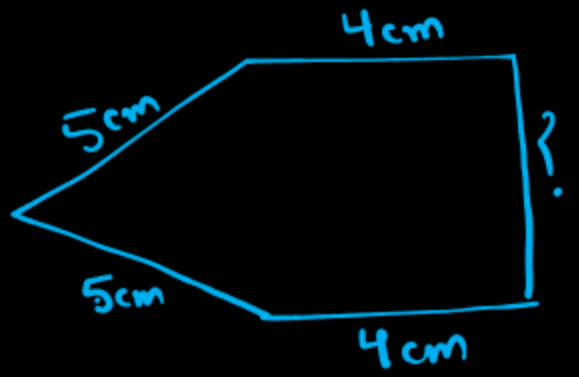
(i)



Primeter = 18cm

missing length = 18cm − (6+3+5)cm
= 18cm − 14cm
= 4cm.

(ii)



Primeter = 24cm

missing length = 24 − 18cm
= 6cm.

End of the chapter