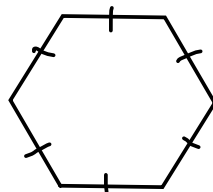


LESSON # 42 ~ Perimeter of a Regular Polygon

Regular Polygons with n sides of side length "s" units?????  
 What does this mean....



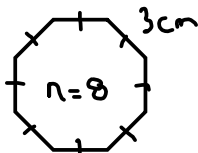
hex = 6 = n

S = side length

Perimeter is

$$P = S(n)$$

Example 1



$$\begin{aligned} P &= Sn \\ &= 3(8) \\ &= 24 \text{ cm} \end{aligned}$$

Octagon

Example 2

The perimeter of a regular decagon is 112cm. Find the length of each side.

$$\begin{aligned} n &= 10 & P &= Sn \\ P &= 112 & \frac{112}{10} &= \frac{10S}{10} \\ & & 11.2 \text{ cm} &= S \end{aligned}$$

Example 3

Name the regular polygon.

Side length is 11.7 & perimeter is 70.2cm

$$P = 70.2 \text{ cm} \quad S = 11.7$$

$$\begin{aligned} P &= Sn \\ \frac{70.2}{11.7} &= \frac{11.7n}{11.7} \\ 6 &= n \quad \text{Hexagon} \end{aligned}$$

Homework

Act Booklet

P 77-79