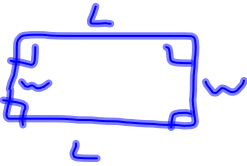
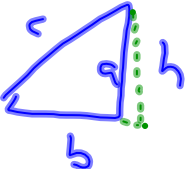



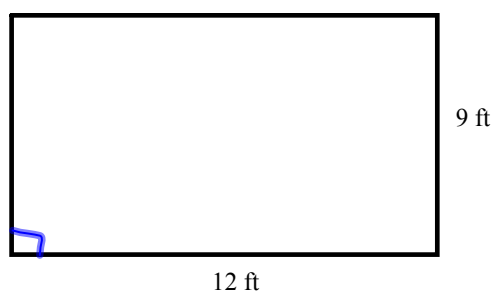
Warm Up

1. Draw a convex pentagon.
2. Change 72 inches to feet.
3. Find the distance between (2, 3) and (-1, 4).

1-7 Perimeter, Circumference, and Area

Shape	Perimeter	Area
	$2L + 2w$	$L \cdot w$
	$a + b + c$	$\frac{b \cdot h}{2}$
	$\pi \cdot d$ $2\pi r$	πr^2

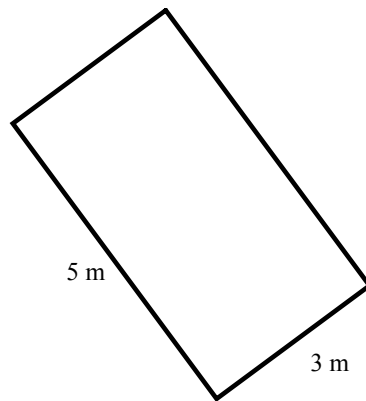
Ex 1 Find the perimeter and area of the room shown.



$$\text{Perim.} = 42 \text{ ft.}$$

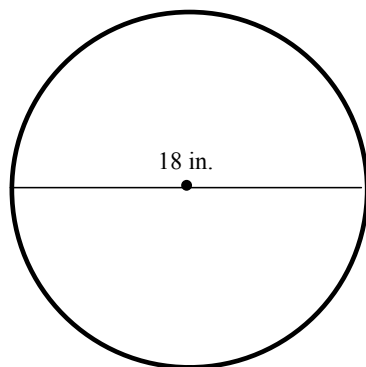
$$\text{area} = 108 \text{ ft}^2$$

Ex 2 Find the perimeter and area of the room shown.



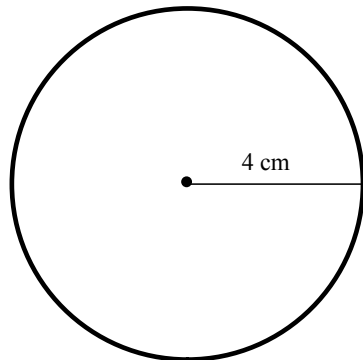
$$\begin{aligned} \text{Perim.} &= 16 \text{ m} \\ \text{area} &= 15 \text{ m}^2 \end{aligned}$$

Ex 3 Find the circumference and area of the circle shown.



$$\begin{aligned} \text{Circum.} &= \pi \cdot d \\ &= 18\pi \text{ in.} \\ &\approx 56.5 \text{ in.} \\ \text{area: } \pi \cdot r^2 &= \pi \cdot 9^2 \\ &= 81\pi \text{ in}^2 \\ &\approx 254.34 \text{ in}^2 \end{aligned}$$

Ex 4 Find the circumference and area of the circle shown.



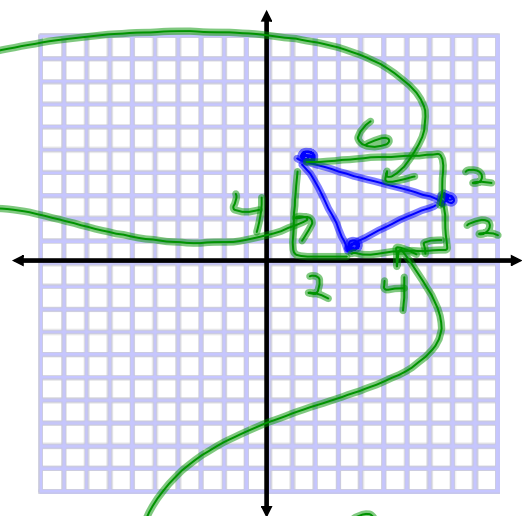
$$\begin{aligned} \text{Circum.} &= 8\pi \text{ cm} \\ &\approx 25.12 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Area} &= 16\pi \text{ cm}^2 \\ &\approx 50.26 \text{ cm}^2 \end{aligned}$$

Ex 5 Triangle ABC has vertices $A(2, 5)$, $B(4, 1)$, and $C(8, 3)$. What is the perimeter of the triangle?

$$\begin{aligned} c^2 &= 6^2 + 2^2 \\ &= 36 + 4 \\ c^2 &= 40 \\ c &= \sqrt{40} \approx \underline{6.32} \\ &\quad \underline{4.47} \end{aligned}$$

Perim ≈ 15.26



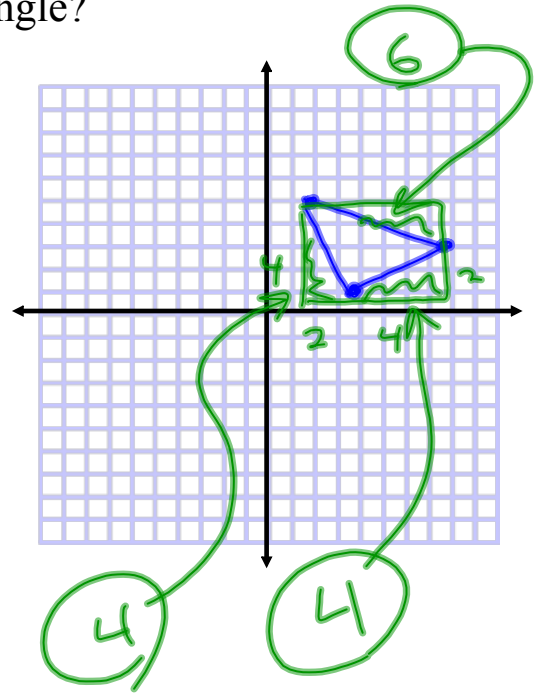
$$\begin{aligned} c^2 &= 4^2 + 2^2 \\ c^2 &= 16 + 4 = 20 \\ c &= \sqrt{20} \\ &\quad \underline{4.47} \end{aligned}$$

Ex 6 Triangle ABC has vertices $A(2, 5)$, $B(4, 1)$, and $C(8, 3)$.
 What is the area of the triangle?

$Rect. = 24$

$-\Delta s = 14$

10 sq. units



Ex 7 The base of a triangle is 14 cm and the area is 42 cm^2 .
 What is the height?

Ex. 8 The area of a rectangle is 24 in^2 and its perimeter is 22 in.
Find the length and width of the rectangle.