




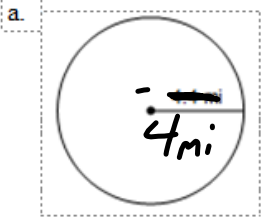


# Lesson 1.3: Area and Perimeter

Search Words:	Area and Perimeter of common shapes:	
Area:	Square: 	$A = l \cdot w$ $A = S^2$
Perimeter	Rectangle: 	$A = l \cdot w$
Finding area in a coordinate plane	Triangle: 	$A = \frac{1}{2}bh$
Regular polygons	Trapezoid: 	$A = \frac{1}{2}h(b_1 + b_2)$
	Circle: 	$C = \pi d$ $A = \pi r^2$
	*Always leave circle in terms of: $\pi$ . Unless you are adding it to one of	

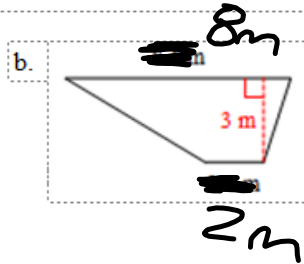
**Example 1**

Find area and perimeter.



$$C = 8\pi \text{ m}$$

$$A = 16\pi \text{ m}^2$$



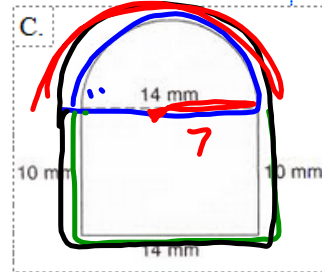
P = Not enough info

$$A = \frac{1}{2}(3)(8+2)$$

$$\frac{1}{2}(3)(10)$$

$$3 \cdot 5$$

$$A = 15 \text{ m}^2$$



10 · 14

$$A_{\square} = 140$$

$$A_{\text{D}} = \frac{49\pi}{2}$$

$$= 77$$

$$A_{\text{D}} = 140 + 77$$

$$217 \text{ mm}^2$$

Perimeter

$$10 + 14 + 10 + \underline{22}$$

$$\frac{1}{2}(14\pi) \rightarrow 7\pi$$

$$= 56 \text{ mm}$$

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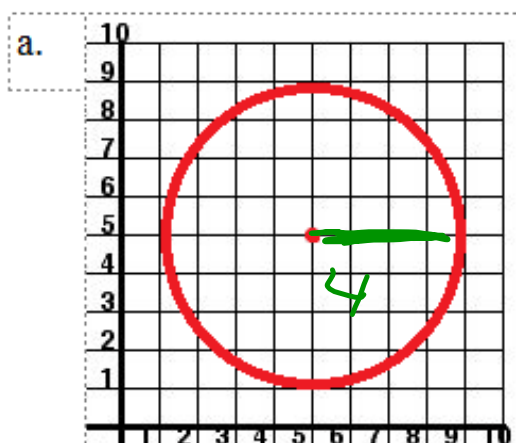
Regular Polygons:

Polygon: shape w/ at least  
3 sides

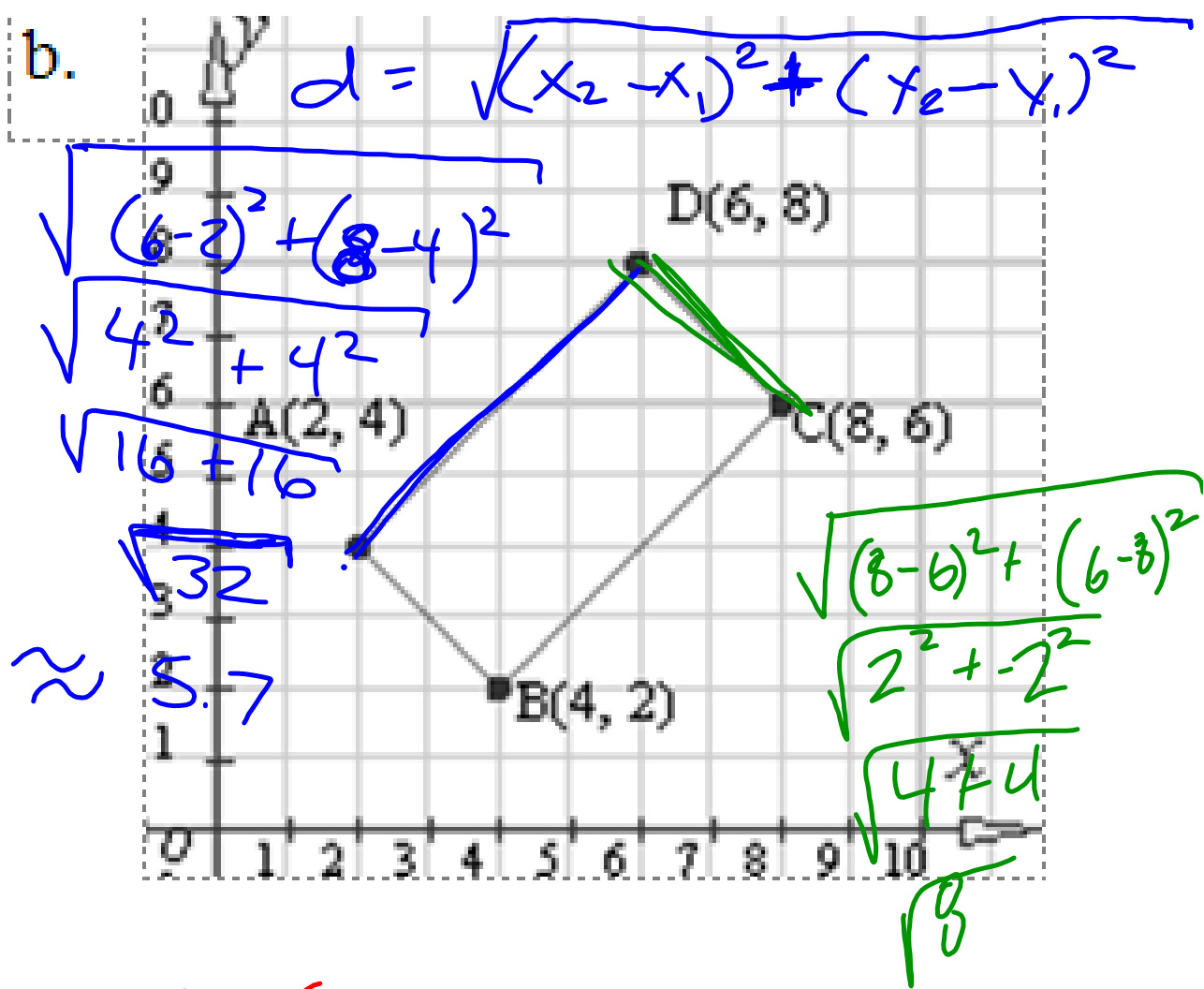
Regular Polygon: all sides  $\cong$   
all angles  $\cong$

Using coordinate geometry to find area and perimeter

**Example 2** Find area.

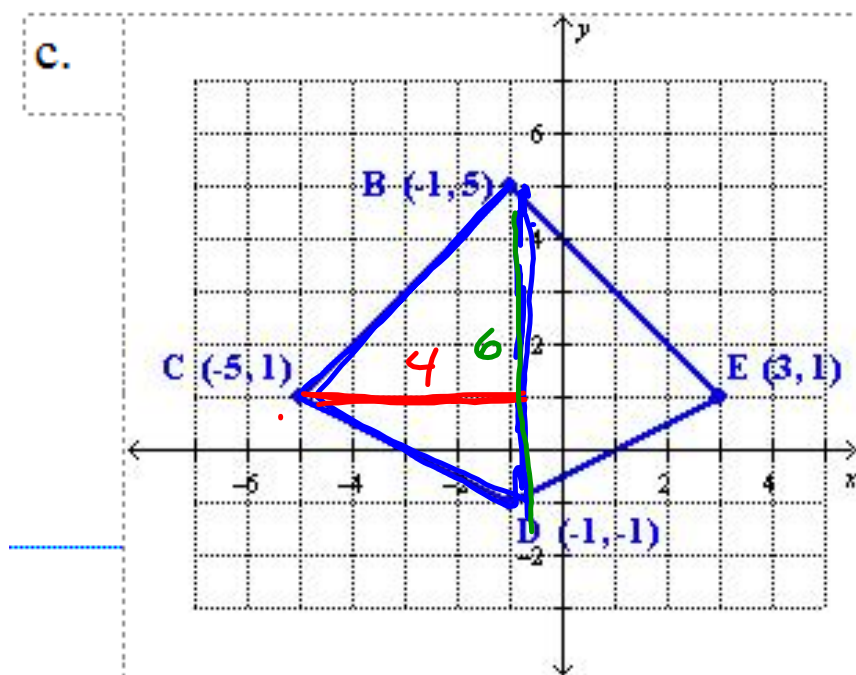


$$A = 16\pi \text{ units}^2$$



$A = (5.7)(2.8)$

$= 16 \text{ units}^2$



$$A = \frac{1}{2}(6)(4)$$
$$3 \cdot 4$$
$$= 12$$

$$A = 12(2) = 24 \text{ units}^2$$