

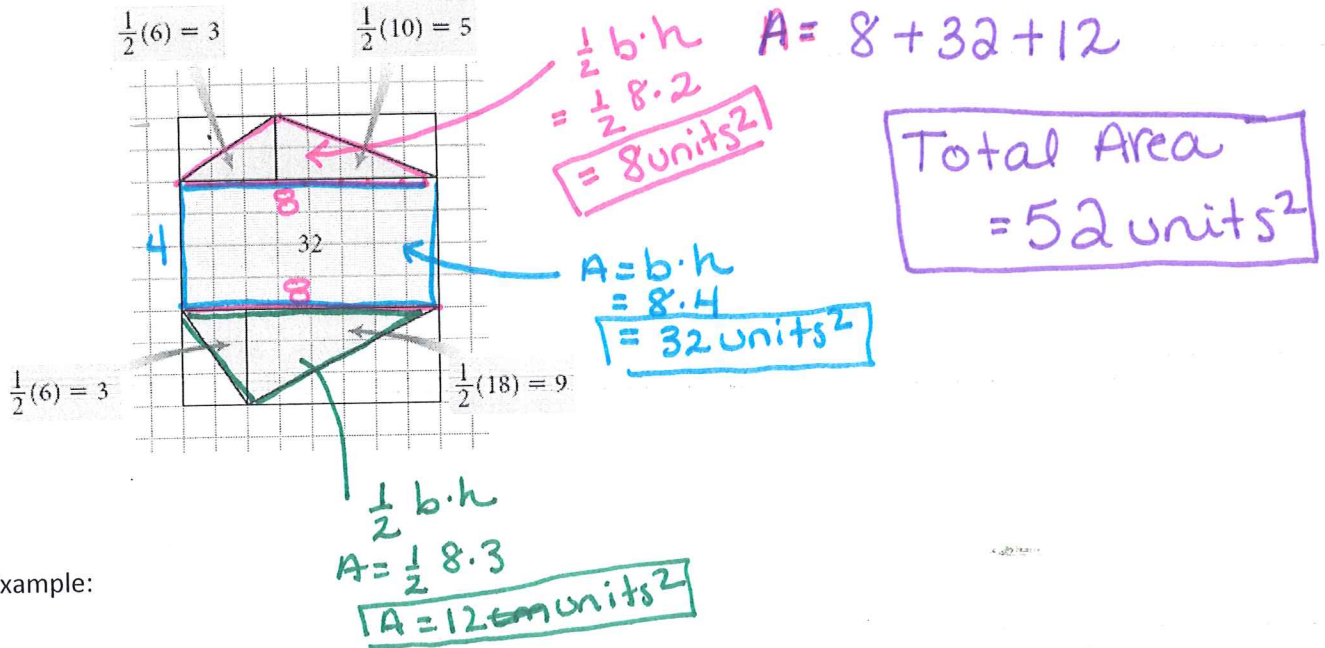
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Key

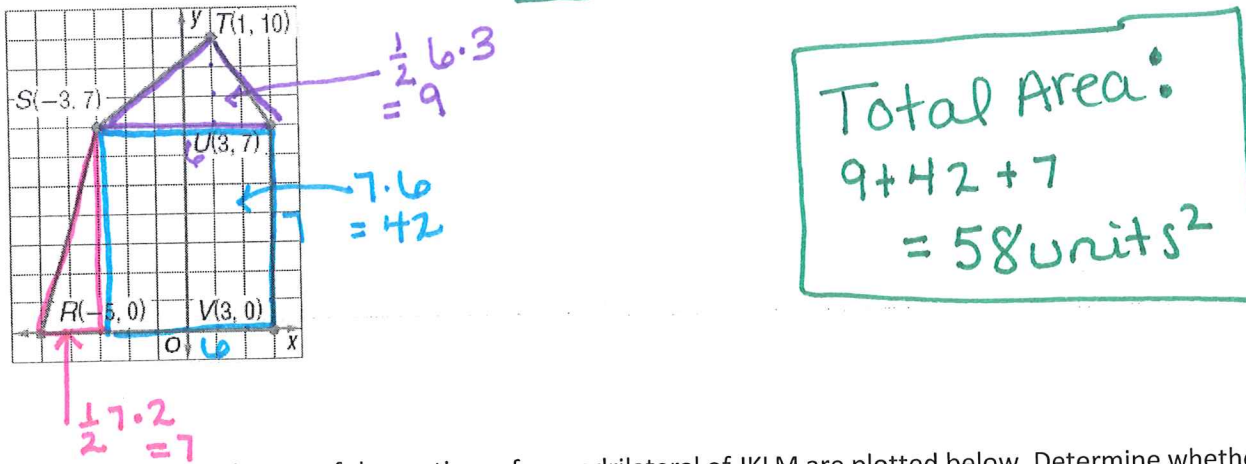
Coordinate Geometry and Composite Figures

Notes and Examples (Sec. 11.4)

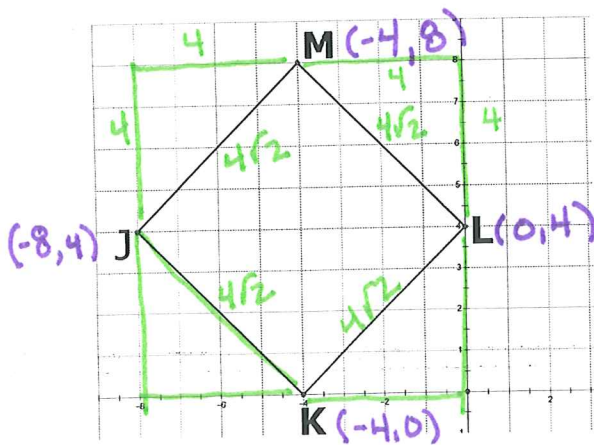
Example: Find the area of each different figure. Color the separate regions and add all areas together.



You try Example:

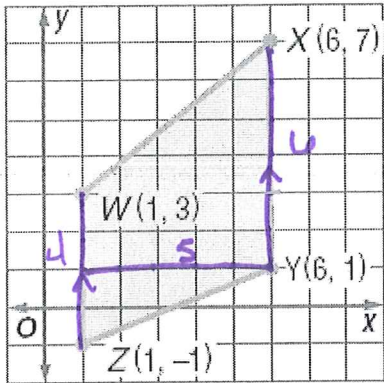


1. (A) The coordinates of the vertices of a quadrilateral JKLM are plotted below. Determine whether JKLM is a square, a rectangle or a parallelogram. (B) Find the area of JKLM.



a.) ∵ 4 ≅ sides and 4 right angles concludes it is classified as a Square (most specific)
 Para, Rhombus, rect.

2. Find the area of the trapezoid.



$$A = \frac{1}{2} h (b_1 + b_2)$$

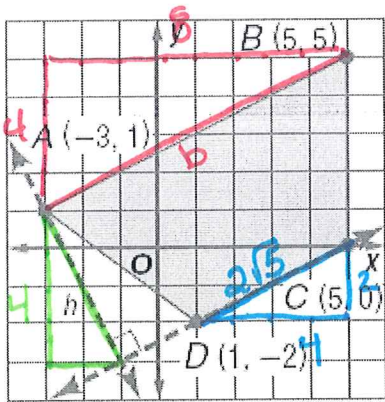
$$A = \frac{1}{2} 5 (5 + 4)$$

$$A = \frac{1}{2} 5 (10)$$

$$A = \frac{1}{2} 50$$

$$A = 25 \text{ units}^2$$

3. Find the area of the trapezoid.



Find DC

$$4^2 + 2^2 = x^2$$

$$\sqrt{20} = x$$

$$2\sqrt{5} = x$$

Find AB:

$$4^2 + 8^2 = b^2$$

$$\sqrt{80} = b$$

$$4\sqrt{5} = b$$

Find h:

$$2^2 + 4^2 = h^2$$

$$2\sqrt{5} = h$$

$$A = \frac{1}{2} h (b_1 + b_2)$$

$$A = \frac{1}{2} 2\sqrt{5} (2\sqrt{5} + 4\sqrt{5})$$

$$A = \frac{1}{2} 2\sqrt{5} (6\sqrt{5})$$

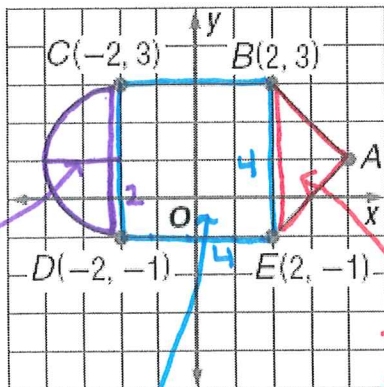
$$= \frac{1}{2} 12\sqrt{25} = 12 \cdot 5$$

$$= \frac{1}{2} 12 \cdot 5$$

$$A = 30 \text{ units}^2$$

Find the area of each figure.

4.



Total Area

$$2\pi + 16 + 4$$

$$A = 20 + 2\pi \text{ units}^2$$

$$\frac{1}{2} \pi r^2$$

$$\frac{1}{2} \pi 2^2$$

$$= 2\pi$$

$$= 4 \cdot 4$$

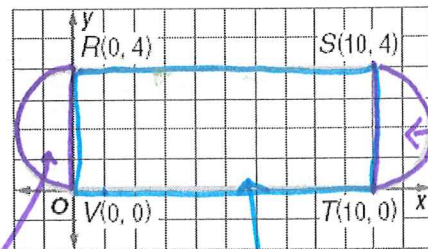
$$= 16$$

$$= \frac{1}{2} b \cdot h$$

$$= \frac{1}{2} 4 \cdot 2$$

$$= 4$$

5.



$$\frac{1}{2} \pi r^2$$

$$\frac{1}{2} \pi 2^2$$

$$= 2\pi$$

$$10 \cdot 4$$

$$= 40$$

$$\text{Total area}$$

$$2\pi + 40 + 2\pi = 40 + 4\pi \text{ units}^2$$

$$\frac{1}{2} \pi r^2$$

$$= 2\pi$$