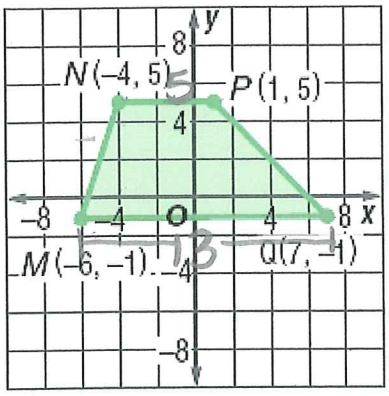
11.1-11.2 COORDINATE GEOMETRY HW

Directions: (A) Classify the polygon. (B) Find the area of each polygon. Round to the nearest hundreth.

1.



a) trapezoid

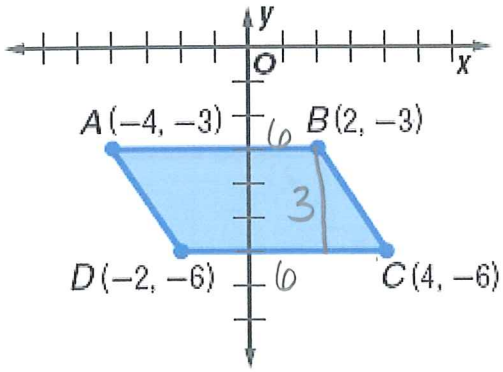
b) $A = \frac{1}{2}(6)(5+13)$

$A = \frac{1}{2}(6)(18)$

$A = \frac{1}{2}(108)$

$A = 54 \text{ units}^2$

2.

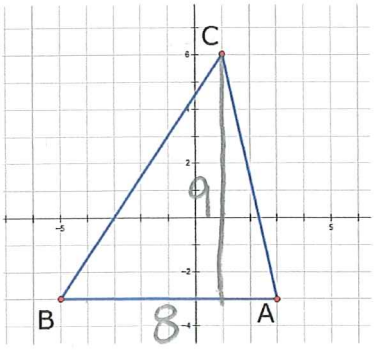


a) Parallelogram

b) $A = (6)(3)$

$A = 18 \text{ units}^2$

3.



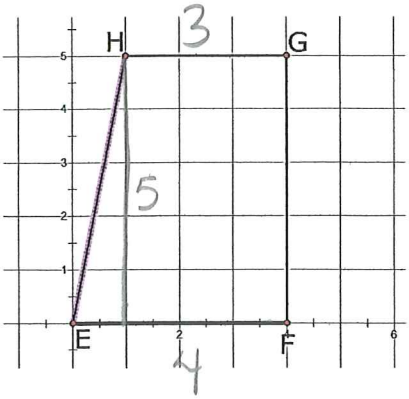
a) Triangle

b) $\frac{1}{2}(8)(9) = A$

$A = \frac{1}{2}(72)$

$A = 36 \text{ units}^2$

4.



a) Trapezoid

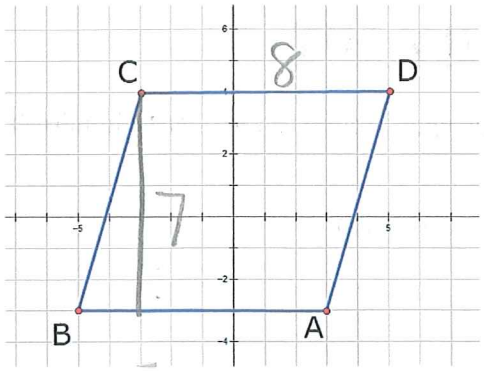
b) $A = \frac{1}{2}(5)(3+4)$

$A = \frac{1}{2}(5)(7)$

$A = \frac{1}{2}(35)$

$A = 17.5 \text{ units}^2$

5.

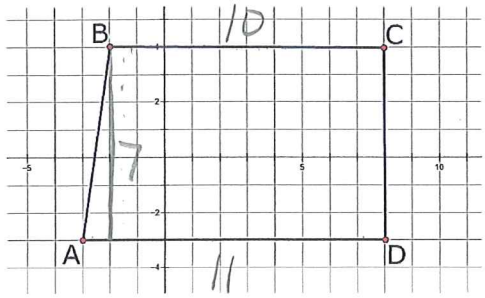


a) Parallelogram

b) $A = (8)(7)$

$\boxed{A = 56 \text{ units}^2}$

6.



a) Trapezoid

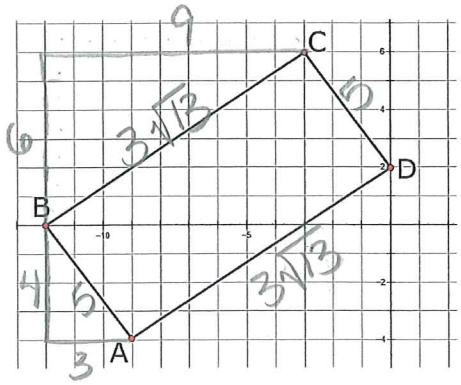
b) $A = \frac{1}{2}(7)(10+11)$

$A = \frac{1}{2}(7)(21)$

$A = \frac{1}{2}(147)$

$\boxed{A = 73.5 \text{ units}^2}$

8.



a) Rectangle

b) $A = (5)(3\sqrt{13})$

$\boxed{A = 15\sqrt{13} \text{ units}^2}$

$4^2 + 3^2 = x^2$

$16 + 9 = x^2$

$\sqrt{25} = \sqrt{x^2}$

$x = 5$

$6^2 + 9^2 = x^2$

$36 + 81 = x^2$

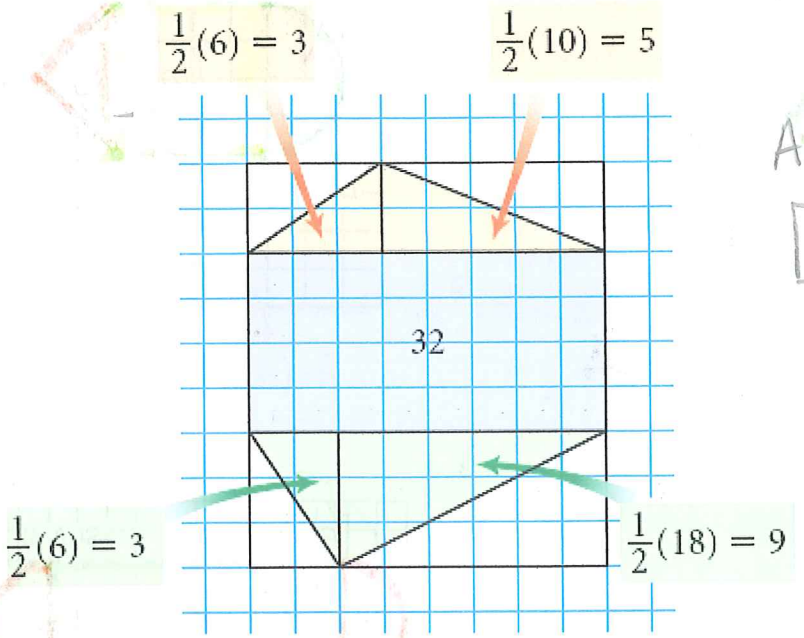
$\sqrt{117} = \sqrt{x^2}$

$x = 3\sqrt{13}$

11.4 Coordinate Geometry and Composite Figures

Notes and Examples

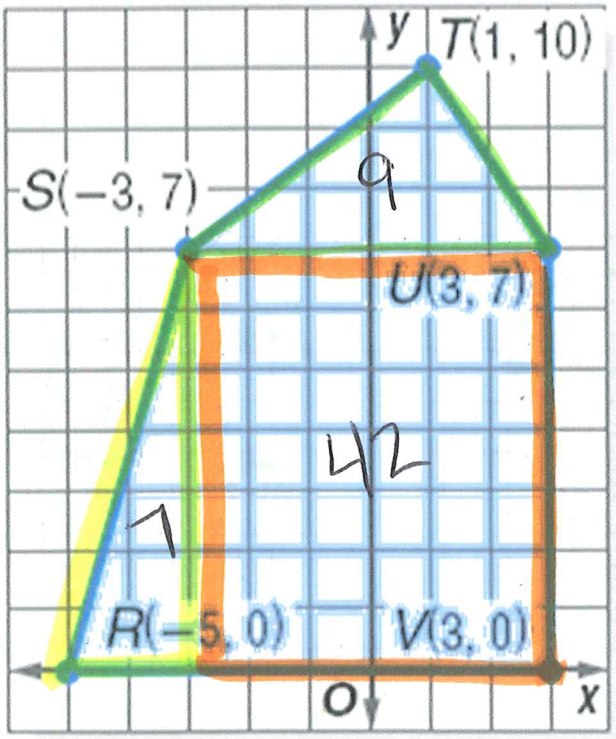
Example: Find the area of each different figure. Color the separate regions and add all areas together.



Area = 3 + 5 + 32 + 3 + 9

A = 52 units²

You try this example:



Area = 42 + 9 + 7 = 58 units²

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

$A = \frac{1}{2}(18)$

$A = 9$ units²

$A = (7)(6)$

$A = 42$ units²

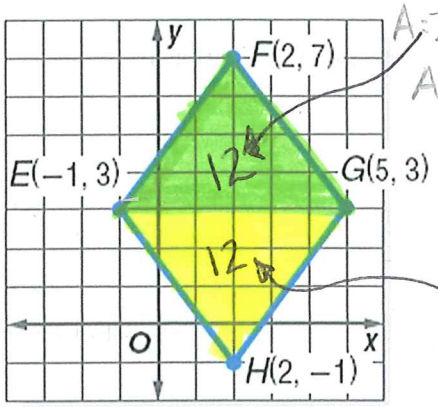
$A = \frac{1}{2}(2)(7)$

$A = \frac{1}{2}(14)$

$A = 7$ units²

Find the area of each composite figure. You must show all work.

1.



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

$A = \frac{1}{2}(24)$

$A = 12 \text{ units}^2$

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

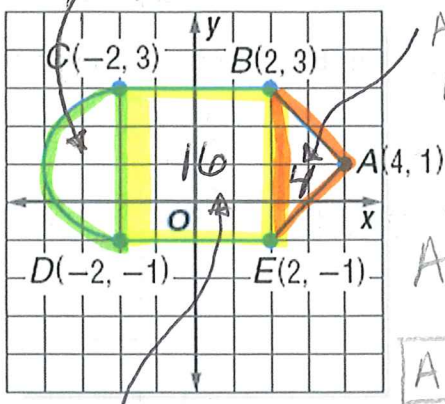
$A = \frac{1}{2}(24)$

$A = 12 \text{ units}^2$

Area $= 12 + 12$

Area $= 24 \text{ units}^2$

2.



$A = \pi(2)^2$

$A = 4\pi \rightarrow \frac{1}{2}(4\pi) = 2\pi$ b/c $\frac{1}{2}$ circle

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

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

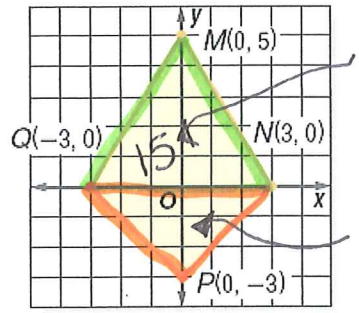
$A = 4$

Area $= 4 + 16 + 2\pi$

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

$A = (4)(4) = 16$

3.



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

$A = \frac{1}{2}(30)$

$A = 15$

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

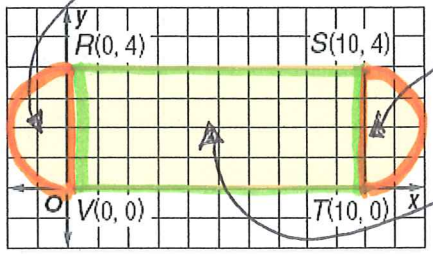
$A = \frac{1}{2}(18)$

$A = 9$

Area $= 15 + 9 =$

$A = 24 \text{ units}^2$

4.



$A = \pi(2)^2$

$A = 4\pi$

$A = (10)(4)$

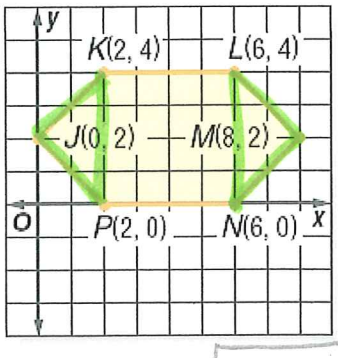
$A = 40$

Area $= 40 + 4\pi$

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

Now you try!!!!

5.

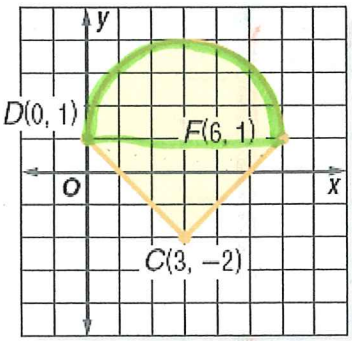


$A = 16 + 8 = 24 \text{ units}^2$

$A = (4)(4) = 16$

$A = 2(\frac{1}{2}(4)(2)) = 8$

6.

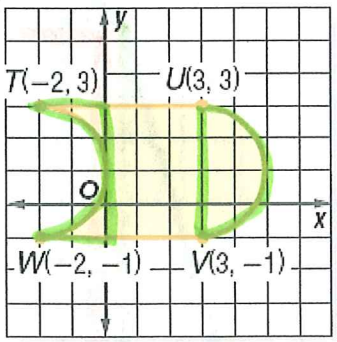


$A = 9 + 4.5\pi \text{ units}$

$A = \frac{1}{2}(6)(3) = 9$

$A = \frac{1}{2}\pi(3)^2 = 4.5\pi$

7.



$A = 12 + 8 = 20 \text{ units}^2$

$A = (3)(4) = 12$

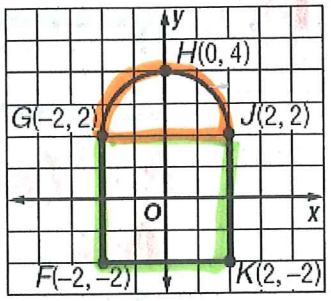
$A = (2)(4) = 8$

Name: _____

Areas of Composite Figures Homework

Find the area of each figure. Round to the nearest tenth.

1.



$A = \frac{1}{2}\pi(2)^2$

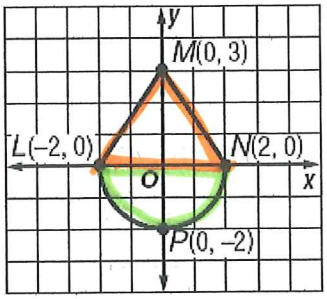
$A = 2\pi$

$A = (4)(4)$

$A = 16$

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

2.



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

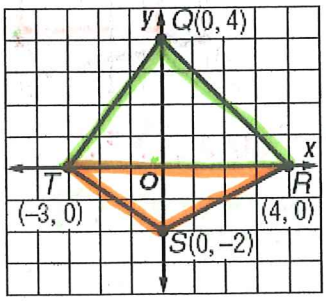
$A = \frac{1}{2}(12) = 6$

$A = \frac{1}{2}\pi(2)^2$

$A = 2\pi$

$A = 6 + 2\pi \text{ units}^2$

3.



$A = \frac{1}{2}(7)(4)$

$A = \frac{1}{2}(28) = 14$

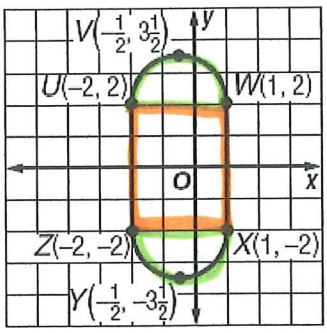
$A = \frac{1}{2}(7)(2)$

$A = \frac{1}{2}(14) = 7$

$A = 14 + 7$

$A = 21 \text{ units}^2$

4.



$A = \pi(1.5)^2$

$A = 2.25\pi$

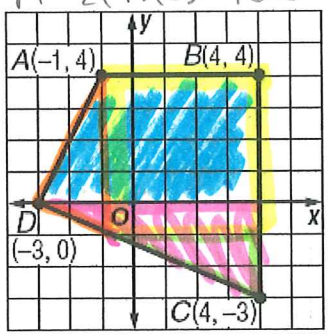
$A = (4)(3)$

$A = 12$

$A = 12 + 2.25\pi \text{ units}^2$

5.

$A = \frac{1}{2}(7)(3) = 10.5$



$A = \frac{1}{2}(4)(5+7)$

$A = 24 \text{ units}^2$

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

~~$A = 5$~~

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

~~$A = 4$~~

~~$A = (5)(5)$~~

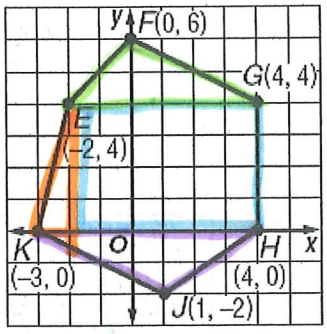
~~$A = 25$~~

$A = 34.5 \text{ units}^2$

~~$A = 5 + 4 + 25$~~

$A = 34.5 \text{ units}^2$

6.



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

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

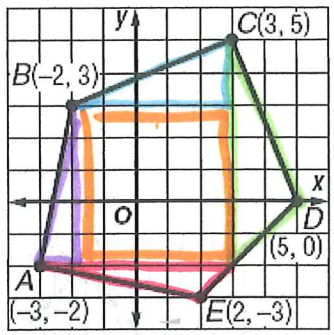
$A = (4)(6) = 24$

$A = \frac{1}{2}(7)(2) = 7$

$A = 24 + 2 + 6 + 7$

$A = 39 \text{ units}^2$

7. pentagon *ABCDE*



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

$A = (5)(5)$

$= 25$

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

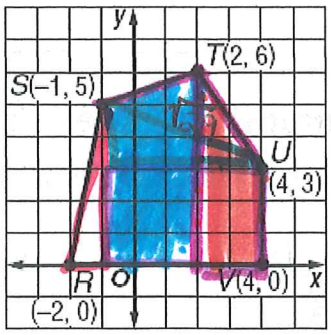
$A = \frac{1}{2}(7)(2) = 7$

$A = \frac{1}{2}(1)(5) = 2.5$

$A = 25 + 5 + 3 + 7 + 2.5$

$A = 42.5 \text{ units}^2$

8. pentagon *RSTUV*



$A = \frac{1}{2}(1)(5) = 2.5$

~~$A = (5)(3)$~~

~~$= 15$~~

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

~~$A = \frac{1}{2}(\sqrt{29})($~~

$A = \frac{1}{2}(2)(3+6)$

$A = 9$

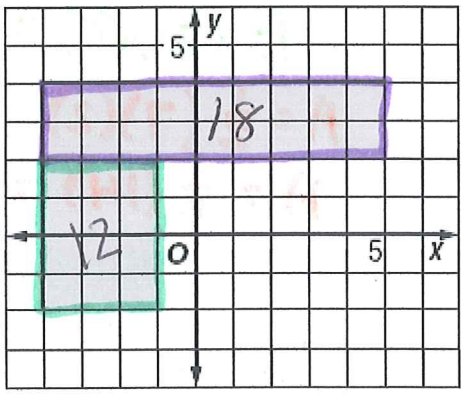
$A = 28 \text{ units}^2$

$A = \frac{1}{2}(5+6)(3)$

$A = \frac{1}{2}(11)(3)$

$A = 16.5$

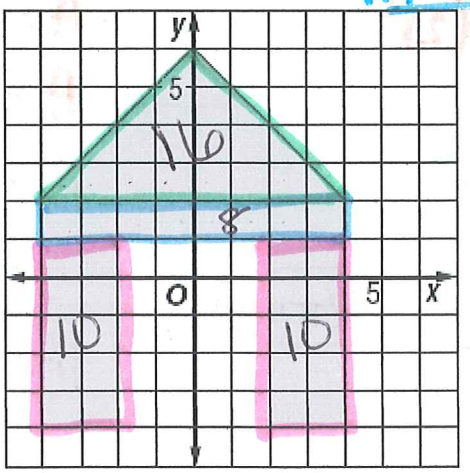
9.



$A = 18 + 12$

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

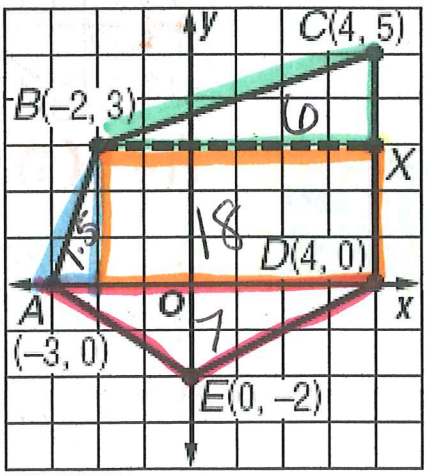
10.



$A = 10 + 10 + 16 + 8$

$A = 44 \text{ units}^2$

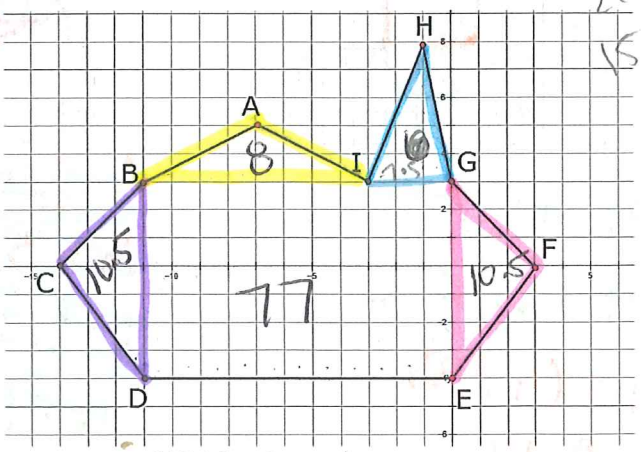
11.



$A = 18 + 7 + 6 + 1.5$

$A = 32.5 \text{ units}^2$

12.



OH! It's a bunny!

$\frac{1}{2}(3)(15)$

$15(\frac{1}{2})$

$A = 77 + 10.5 + 10.5 + 8 + 7.5$

$A = 113 \text{ units}^2$ 113.5