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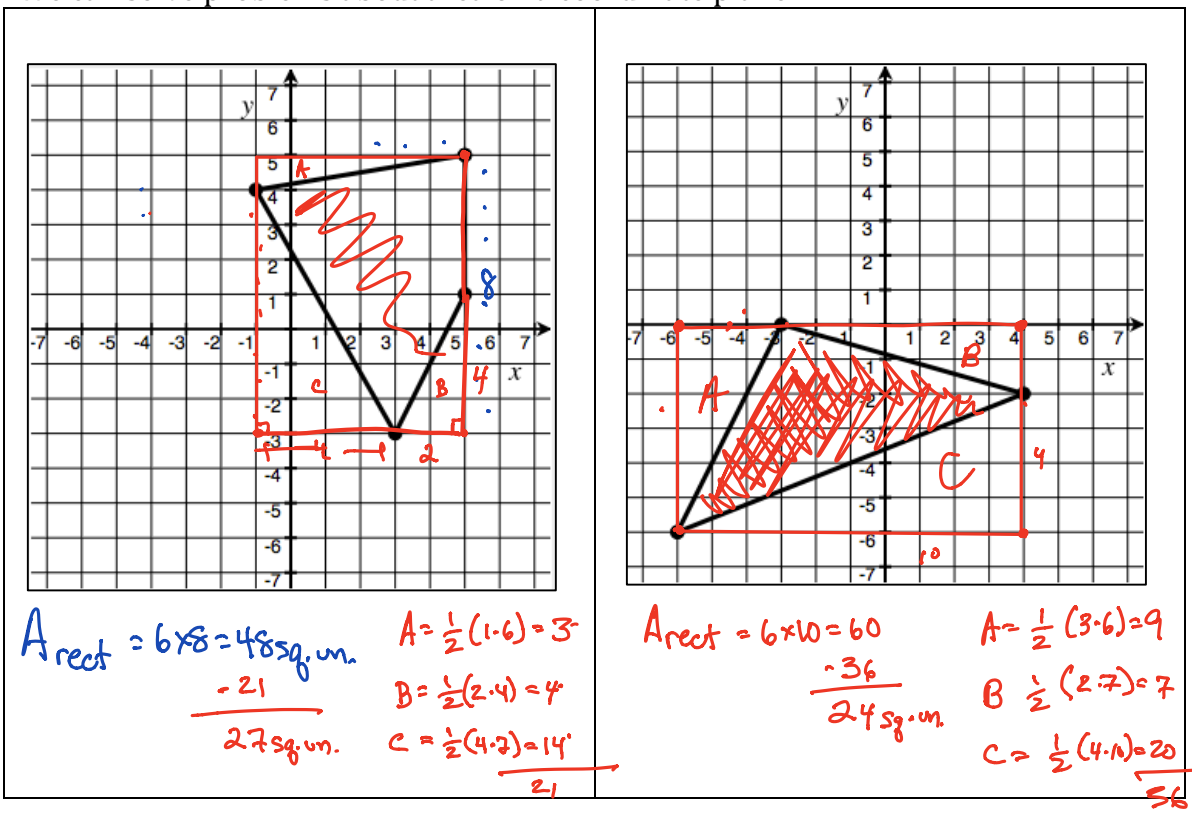
Mr. Rogove Date: _____

LEARNING OBJECTIVE: We will solve composite area problems. (G7M3L20)

ACTIVATING PRIOR KNOWLEDGE

We can solve problems about area on a coordinate plane.



$A_{rect} = 6 \times 8 = 48$ sq. un.

-21

27 sq. un.

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

$B = \frac{1}{2}(2 \cdot 4) = 4$

$C = \frac{1}{2}(4 \cdot 2) = 14$

21

$A_{rect} = 6 \times 10 = 60$

-36

24 sq. un.

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

$B = \frac{1}{2}(2 \cdot 7) = 7$

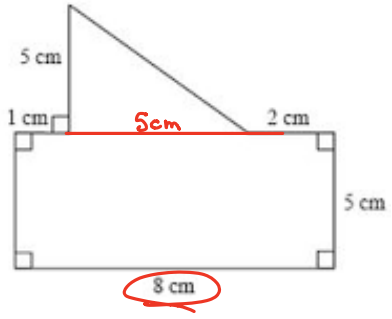
$C = \frac{1}{2}(4 \cdot 10) = 20$

56

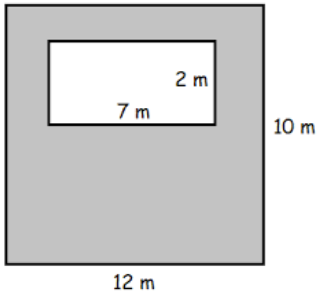
CONCEPT DEVELOPMENT

Composite Figure: A figure that can be divided into more than one basic figure such as a triangle, rectangle or semicircle.

Examples:



$A_{rect} + A_{tri}$ ADDING



$A_{big} - A_{small}$

SUBTRACTING

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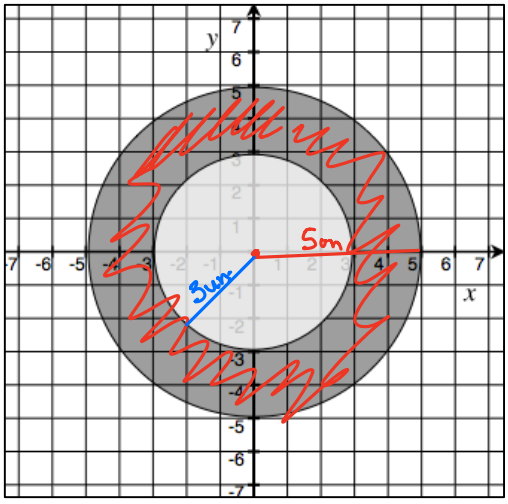
GUIDED PRACTICE

Steps for Finding Areas of Composite Shapes

1. Identify the individual shapes you need to find an area for.
2. Determine whether you are adding or subtracting areas.
3. Perform the necessary calculations to determine the area.

Find the area of the shaded region

SUBTRACTING



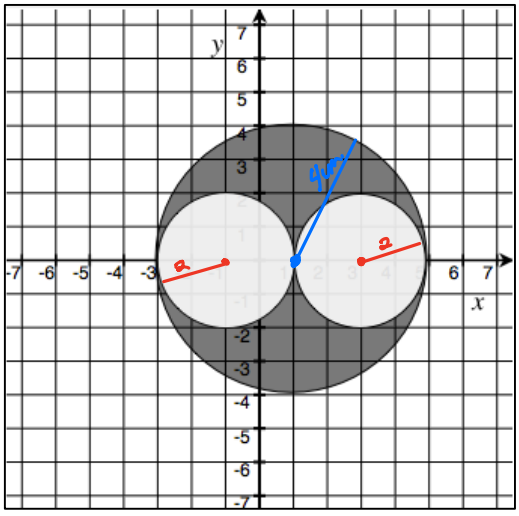
AREA OF BIG CIRCLE $5^2\pi = 25\pi$ un.^{2}

− AREA OF SMALL CIRCLE $3^2\pi = 9\pi$ un.^{2}

16π un.^{2}

50.24 un.^{2}

Find the area of the shaded region.



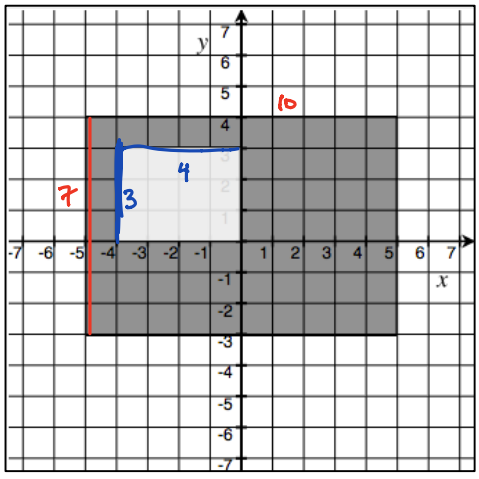
Area of big circle $4^2\pi$ 16π

Area of 2 small circle $2^2\pi \cdot 4\pi$ 8π

$\times 2$ 8π

25.12 un.^{2}

Find the area of the shaded region.

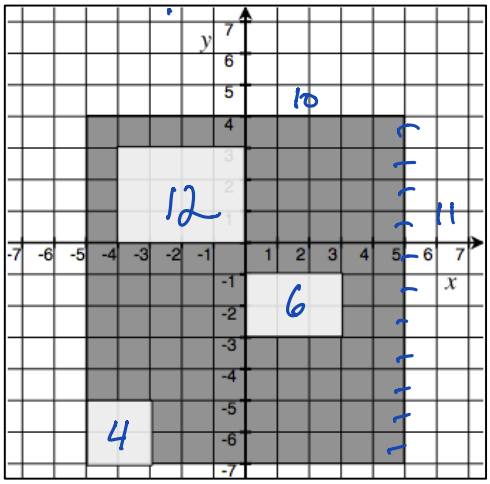


Area big □ = 70

Area small □ = − 12

58 un.^{2}

Find the area of the shaded region.



110 − 22 = 88 sq. un.

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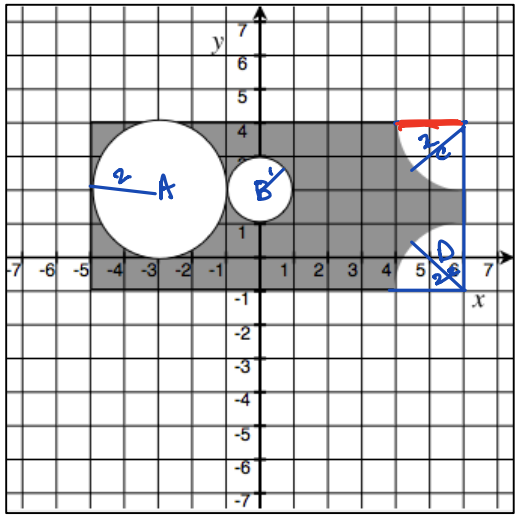
Find the area of the shaded region.



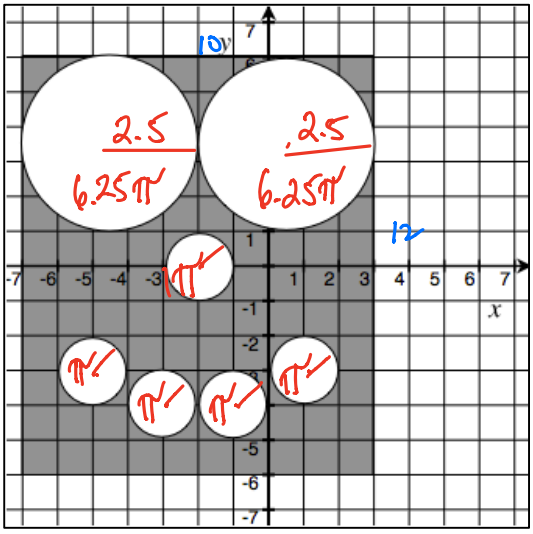
A rect = 5 × 11 = 55

A = πr² = 4π
B = π1² = 1π
C = ¼(π2²) = 1π
D = ¼(π2²) = 1π
7π

55.00
− 21.98
33.02 sq. un.

21.98

Find the area of the shaded region.

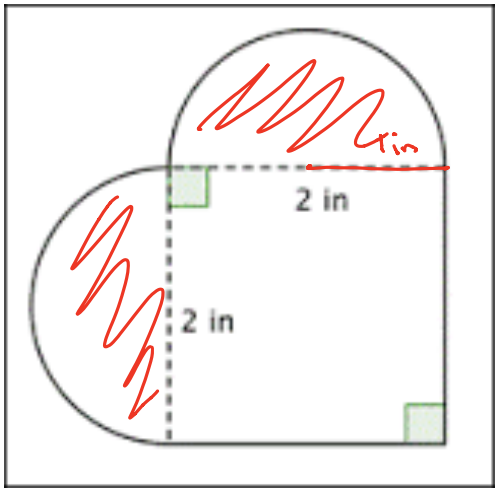


10 × 12 = 120

17.5π
54.95

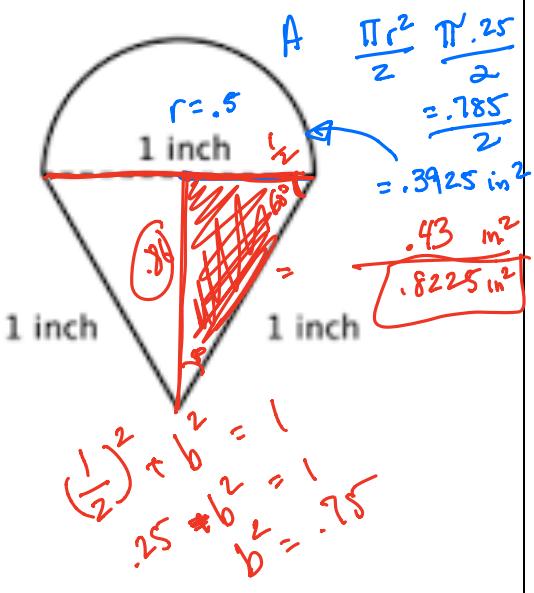
120.00
− 54.95
65.05 un.²

Find the area of the shape below



π + 4 = 7.14 sq. in.

Find the area of the shape below.



$\frac{\pi r^2}{2}$ $\frac{\pi \cdot .25}{2}$ $= \frac{.785}{2}$ $= .3925\ in^2$

.43 in²
.8225 in²

$(\frac{1}{2})^2 + b^2 = 1$
$.25 + b^2 = 1$
$b^2 = .75$

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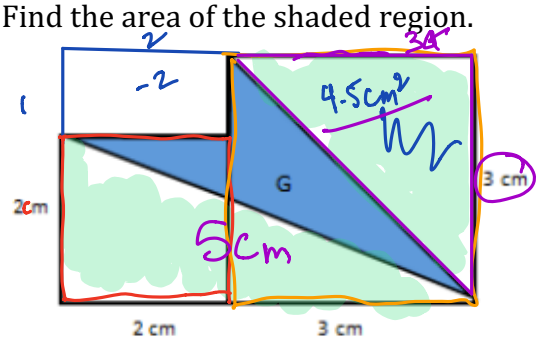
Find the area of the shaded region.

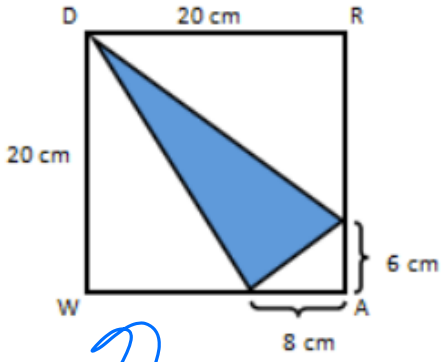


$4cm^2 + 9cm^2 = 13cm^2$

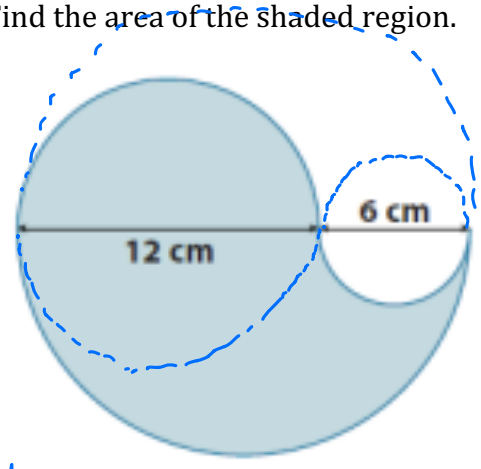
$4.5cm^2 + 5cm^2 = 9.5cm^2$

$3.5cm^2$

Find the area of the shaded region.



Find the area of the shaded region.



$A = 254.34 \div 2$

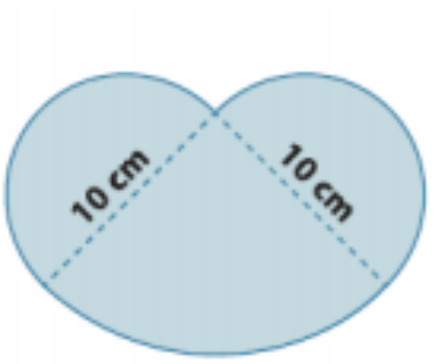
$A = 28.26 \div 2$

$A = 56.52$

$127.17 - 14.13 = 113.04$

$113.04 + 56.52 = 169.56$ Sq. cm

Find the area of the shaded region.



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Mr. Rogove Date: _____

INDEPENDENT PRACTICE

No independent practice…maybe Stained Glass from IM.

CLOSURE

NOTES

This corresponds to lesson 20 from Mod 3 Grade 7.