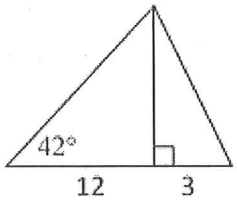
Name: _____

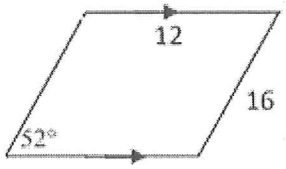
Area Review: Trig Warm Up

Find the area of each figure using trig to find the missing parts. Give your answer to the nearest tenth.

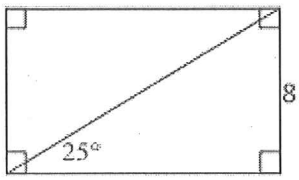
1.



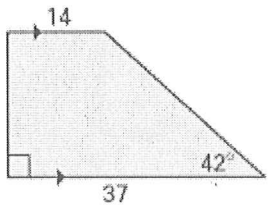
2.



3.

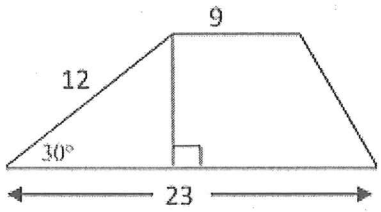


4.



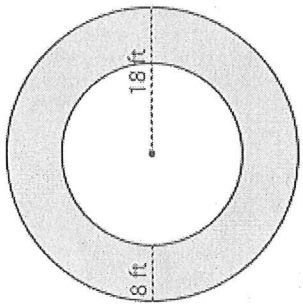
Find the area of each figure using special triangles to find the missing parts. Give your answer in EXACT VALUE and then round to the nearest tenth.

5.

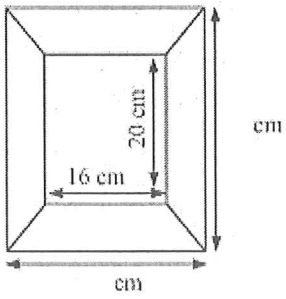


Area Intervention

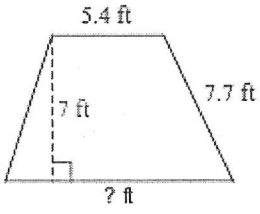
1. Find the area of the shaded region. Give answer in terms of pi and rounded to nearest hundredth.



2. The picture is enclosed in a frame that is 4 inches wide. What is the area of the picture, including the frame?

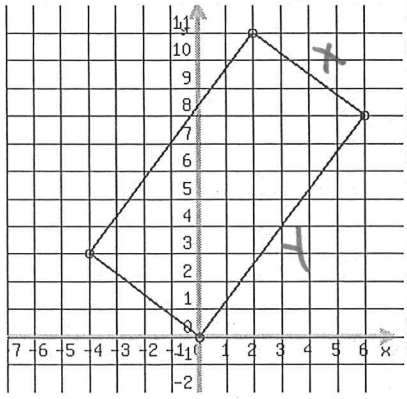


3. Find the missing measurement given the area.



Area = 57.4 ft²

4. Find the area of the figure. Find x and y for this rectangle, then find area.

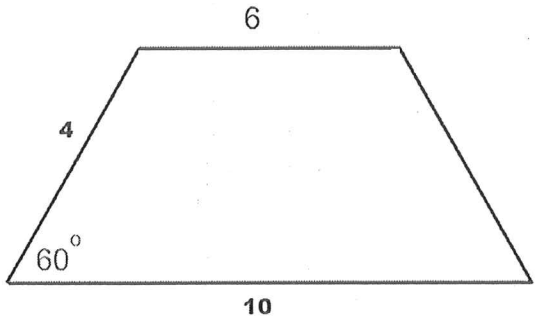


5. Complete the conversions.

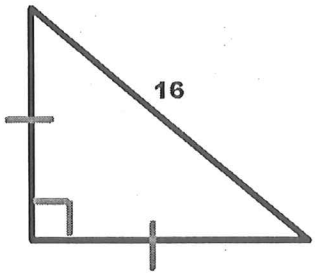
a) 850 ft² = _____ yd²

b) 110 ft² = _____ in²

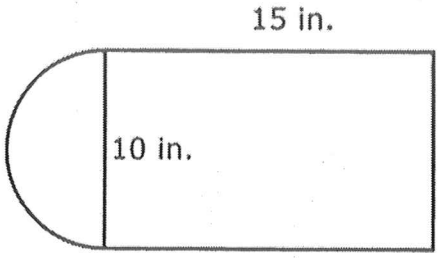
6. Find the EXACT area of the trapezoid using special right triangles.



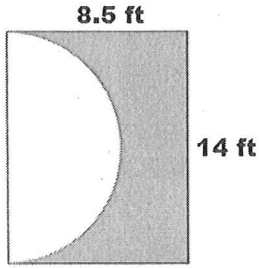
7. Find the EXACT area of the triangle using special right triangles.



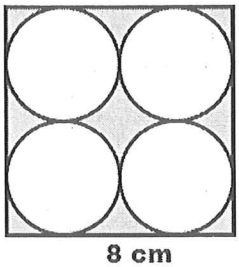
8. Find the area of the figure. Give the exact value and then round to the nearest hundredth.



9. Find the area of the shaded region. Give the exact value and then round to the nearest hundredth.



10. Find the area of the shaded region. Give the exact value and then round to the nearest hundredth.

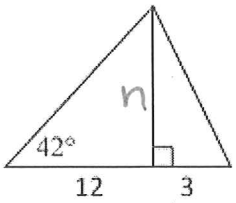


Name: Key

Area Review: Trig Warm Up

Find the area of each figure using trig to find the missing parts. Give your answer to the nearest tenth.

1.



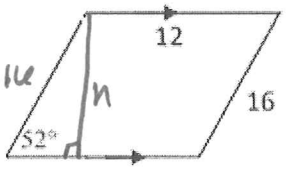
$\tan(42) = \frac{h}{12}$

$10.8 = h$

$A = \frac{1}{2}15 \cdot 10.8$

$A \approx 81.0 \text{ units}^2$

2.



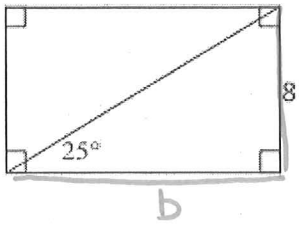
$\sin(52) = \frac{h}{16}$

$h = 12.6$

$A = 12 \times 12.6$

$A \approx 151.2 \text{ units}^2$

3.



$\tan(25) = \frac{8}{b}$

$b \tan(25) = 8$

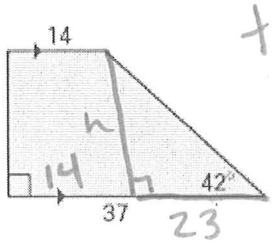
$b = \frac{8}{\tan(25)}$

$b = 17.2$

$A = 17.2 \times 8$

$A \approx 137.6 \text{ units}^2$

4.



$\tan(42) = \frac{h}{23}$

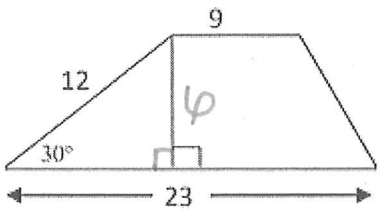
$h = 20.7$

$A = \frac{1}{2}(20.7)(37+14)$

Find the area of each figure using special triangles to find the missing parts. Give your answer in EXACT VALUE and then round to the nearest tenth.

↑ No need ☺

5.



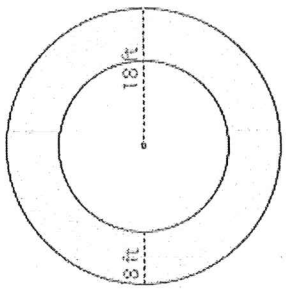
$A = \frac{1}{2}6(9+23)$

$A = 96 \text{ units}^2$

Key

Area Intervention

1. Find the area of the shaded region. Give answer in terms of pi and rounded to nearest hundredth.



Shaded = big circle - small circle

$\pi r^2 - \pi r^2$

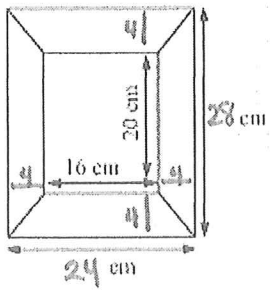
$18^2\pi - 10^2\pi$

$324\pi - 100\pi$

$224\pi\ ft^2$ – exact

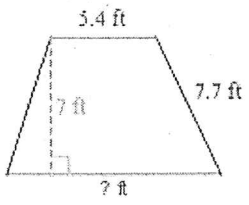
$703.72\ ft^2$ – approx

2. The picture is enclosed in a frame that is 4 inches wide. What is the area of the picture, including the frame?



$28 \times 24 = 672\ cm^2$

3. Find the missing measurement given the area.



Area = 57.4 ft²

$\frac{1}{2}(7)(b+5.4)=57.4$

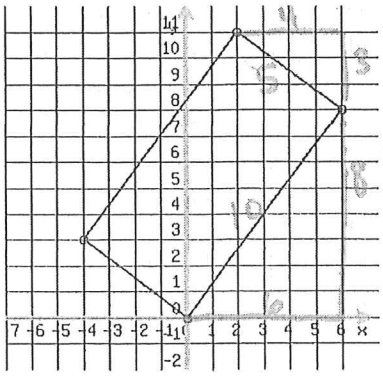
$3.5(b+5.4)=57.4$

$3.5b+18.9=57.4$

$3.5b=38.5$

$b=11\ ft$

4. Find the area of the figure.



Area = 5(10)

50 units²

5. Complete the conversions.

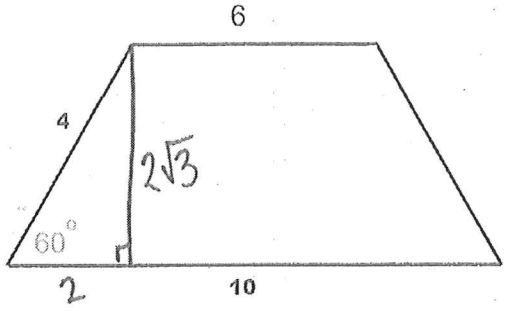
a) 850 ft² = 94.4 yd²

$\frac{850\ ft^4}{1}\ \frac{1\ yd^2}{9\ ft^2}$

b) 110 ft² = 15,840 in²

$\frac{110\ ft^2}{1}\ \frac{144\ in^2}{1\ ft^2}$

6. Find the EXACT area of the trapezoid using special right triangles.

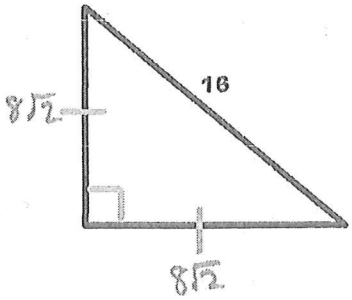


$\frac{1}{2}(2\sqrt{3})(6+10)=A$

$(\sqrt{3})(16)=A$

$16\sqrt{3}$ units^2 $=A$

7. Find the EXACT area of the triangle using special right triangles.

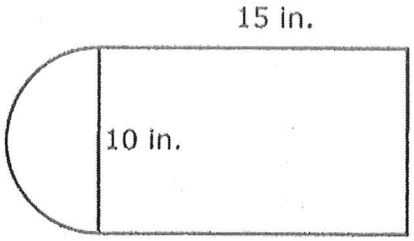


$\frac{1}{2}(8\sqrt{2})(8\sqrt{2})=A$

$\frac{1}{2}(128)=A$

64 units^2

8. Find the area of the figure. Give the exact value and then round to the nearest hundredth.

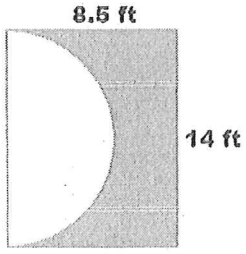


$10\times15+\frac{1}{2}(5^2\pi)$

$150+12.5\pi$ in^2 - exact

189.27 in^2 - approx

9. Find the area of the shaded region. Give the exact value and then round to the nearest hundredth.

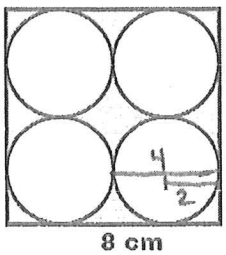


$14\times8.5-\frac{1}{2}(\pi\cdot7^2)$

$119-24.5\pi$ ft^2 - exact

42.03 ft^2 - approx

10. Find the area of the shaded region. Give the exact value and then round to the nearest hundredth.



$8\times8-4(2^2\pi)$

$64-16\pi$ cm^2 - exact

13.73 cm^2 - approx