

# 9.1 PRACTICE

Draw the following. Find the area. Label your answer!

1.  $\square$  YEAH with base of 12 ft and height of 9 ft.



$$A = 12(9)$$

$$A = 108 \text{ ft}^2$$

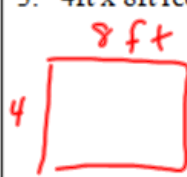
2.  $\triangle$  YES with base 4.5 cm and altitude of 3 cm.



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

$$A = 6.75 \text{ cm}^2$$

3. 4ft x 8ft rectangle YEPS.

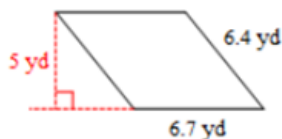


$$A = 4(8)$$

$$A = 32 \text{ ft}^2$$

Find the area of each. Label your answer!

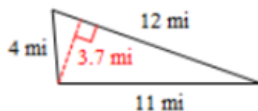
4.



$$A = 6.7(5)$$

$$A = 33.5 \text{ yd}^2$$

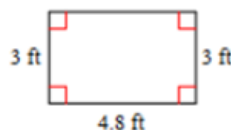
5.



$$A = \frac{1}{2}(11)(3.7)$$

$$A = 20.35 \text{ mi}^2$$

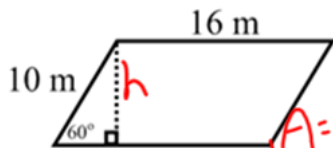
6.



$$A = 4.8(3)$$

$$A = 14.4 \text{ ft}^2$$

7.

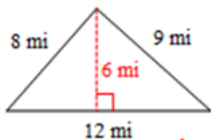


$$A = 16(5\sqrt{3})$$

$$A = 80\sqrt{3} \text{ m}^2$$

$2 \triangle$   
 $\frac{10}{2} = \frac{h}{\sqrt{3}}$   
 $2h = 10\sqrt{3}$   
 $h = 5\sqrt{3}$

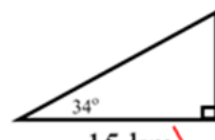
8.



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

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

9.

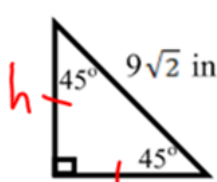


$$A = \frac{1}{2}(15)(10.12)$$

$$A = 75.9 \text{ km}^2$$

$\tan 34 = \frac{h}{15}$   
 $15 \tan 34 = h$   
 $h = 10.12$

10.



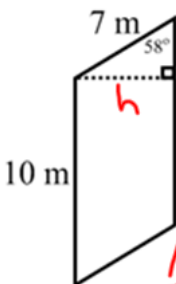
$$\frac{9\sqrt{2}}{\sqrt{2}} = \frac{h}{1}$$

$$h = 9 = b$$

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

$$A = 40.5 \text{ in}^2$$

11.



$$\sin 58 = \frac{h}{7}$$

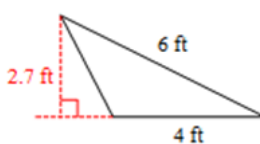
$$7 \sin 58 = h$$

$$h = 5.94 \text{ m}$$

$$A = 10(5.94)$$

$$A = 59.4 \text{ m}^2$$

12.



$$A = \frac{1}{2}(4)(2.7)$$

$$A = 5.4 \text{ ft}^2$$

Find the missing measurement. Round to the nearest tenth.

13.

8.1 km  
6.6 km  
? km  
Area = 79.2 km<sup>2</sup>

$$\frac{79.2}{6.6} = \frac{b(6.6)}{6.6}$$

$$b = 12 \text{ km}$$

14.

11 yd  
11 yd  
? yd  
Area = 123.2 yd<sup>2</sup>

$$123.2 = b(11)$$

$$b = 11.2 \text{ yd}$$

15.

8.4 ft  
7.3 ft  
? ft  
Area = 28.1 ft<sup>2</sup>

$$28.1 = \frac{1}{2}(8.4)h$$

$$28.1 = 4.2h$$

$$\frac{28.1}{4.2} = \frac{4.2h}{4.2}$$

$$h = 6.7 \text{ ft}$$

16.

11.8 yd  
9.7 yd  
? yd  
Area = 47 yd<sup>2</sup>

$$47 = \frac{1}{2}(b)(9.7)$$

$$47 = 4.85b$$

$$\frac{47}{4.85} = \frac{4.85b}{4.85}$$

$$b = 9.69 \text{ yd}$$

Find x.

17.

$x + 3$   
 $x$   
Area = 40 ft<sup>2</sup>

$$40 = x(x + 3)$$

$$40 = x^2 + 3x$$

$$-40 \quad -40$$

$$0 = x^2 + 3x - 40$$

$$0 = (x + 8)(x - 5)$$

$$x = -8 \text{ and } 5$$

-8 is impossible!

18.

$x - 5$   
 $x + 3$   
Area = 65 ft<sup>2</sup>

$$65 = (x + 3)(x - 5)$$

$$65 = x^2 - 5x + 3x - 15$$

$$65 = x^2 - 2x - 15$$

$$-65 \quad -65$$

$$0 = x^2 - 2x - 80$$

$$0 = (x + 8)(x - 10)$$

$$x = -8 \text{ and } 10$$

-8 is impossible!