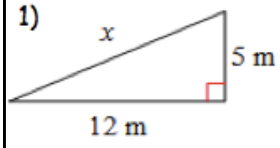
7.1 Practice Solutions

Directions: Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

1)



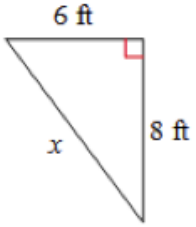
$12^2+5^2=x^2$

$144+25=x^2$

$\sqrt{169}=\sqrt{x^2}$

$13=x$

2)



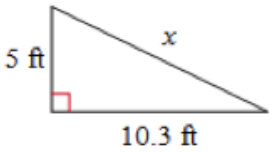
$6^2+8^2=x^2$

$36+64=x^2$

$\sqrt{100}=\sqrt{x^2}$

$10=x$

3)



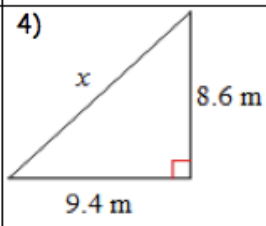
$5^2+10.3^2=x^2$

$25+106.09=x^2$

$\sqrt{131.09}=\sqrt{x^2}$

$X=11.4$

4)



$X^2=8.6^2+9.4^2$

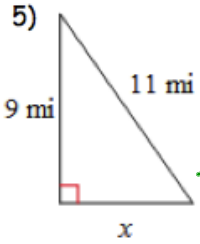
$X^2=73.96+88.36$

$\sqrt{X^2}=\sqrt{162.32}$

$X=12.7$

Directions: Find the missing side of each triangle. Leave your answers in simplest radical form.

5)



$11^2=9^2+x^2$

$121=81+x^2$

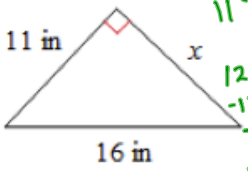
$-81 \quad -81$

$\sqrt{40}=\sqrt{x^2}$

$\sqrt{4}\sqrt{10}=x$

$2\sqrt{10}=x$

6)



$11^2+x^2=16^2$

$121+x^2=256$

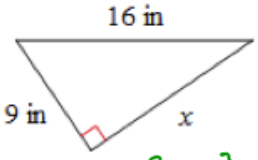
$-121 \quad -121$

$\sqrt{x^2}=\sqrt{135}$

$x=\sqrt{9}\sqrt{15}$

$x=3\sqrt{15}$

7)



$16^2=9^2+x^2$

$256=81+x^2$

$-81 \quad -81$

$\sqrt{175}=\sqrt{x^2}$

$\sqrt{25}\sqrt{7}=x$

$5\sqrt{7}=x$

Directions: State if the three side lengths form a right triangle.

8) 6, 8, 12

$6^2+8^2 \stackrel{?}{=} 12^2$

$36+64 \stackrel{?}{=} 144$

$100 \neq 144$

NO

9) 9, 12, 15

$9^2+12^2 \stackrel{?}{=} 15^2$

$81+144 \stackrel{?}{=} 225$

$225=225$

Yes

10) 10, $\sqrt{69}$, 13

$10^2+\sqrt{69}^2=13^2$

$100+69=169$

$169=169$

Yes

11) 2, $\sqrt{9}$, $\sqrt{14}$

$2^2+\sqrt{9}^2 \stackrel{?}{=} \sqrt{14}^2$

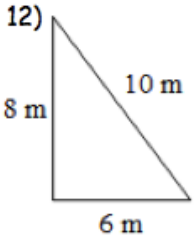
$4+9 \stackrel{?}{=} 14$

$13 \neq 14$

NO

Directions: State if each triangle is acute, obtuse, or right.

12)



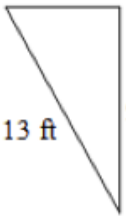
$6^2+8^2 \quad 10^2$

$36+64 \quad 100$

$100 = 100$

RIGHT

13)



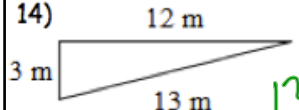
$13^2 \quad 5^2+9^2$

$169 \quad 25+81$

$169 > 106$

OBTUSE

14)



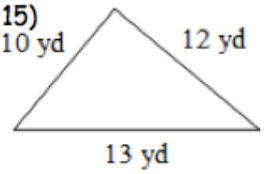
$13^2 \quad 3^2+12^2$

$169 \quad 9+144$

$169 > 153$

OBTUSE

15)



$10^2+12^2 \quad 13^2$

$100+144 \quad 169$

$244 > 169$

ACUTE