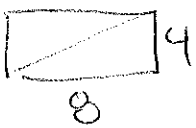

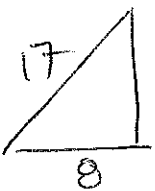
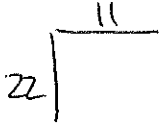
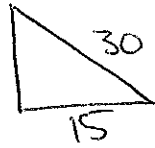
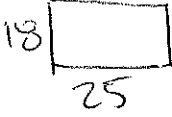


3-5

Practice: Word Problems

Using The Pythagorean Theorem

Lesson 3-5

<p>1. RECREATION A pool table is 8 feet long and 4 feet wide. How far is it from one corner pocket to the diagonally opposite corner pocket? Round to the nearest tenth.</p>  $8^2 + 4^2 = c^2$ $\sqrt{80} = c$ $c = 8.9 \text{ ft}$	<p>2. TRIATHLON The course for a local triathlon has the shape of a right triangle. The legs of the triangle consist of a 4-mile swim and a 10-mile run. The hypotenuse of the triangle is the biking portion of the event. How far is the biking part of the triathlon? Round to the nearest tenth if necessary.</p>  $4^2 + 10^2 = c^2$ $\sqrt{116} = c$ $c = 10.8 \text{ mi}$
<p>3. LADDER A ladder 17 feet long is leaning against a wall. The bottom of the ladder is 8 feet from the base of the wall. How far up the wall is the top of the ladder? Round to the nearest tenth if necessary.</p>  $8^2 + b^2 = 17^2$ $b^2 = 17^2 - 8^2$ $b = 15 \text{ ft}$	<p>4. TRAVEL Tara drives due north for 22 miles then east for 11 miles. How far is Tara from her starting point? Round to the nearest tenth if necessary.</p>  $22^2 + 11^2 = c^2$ $c = \sqrt{605}$ $c = 24.6 \text{ mi}$
<p>5. FLAGPOLE A wire 30 feet long is stretched from the top of a flagpole to the ground at a point 15 feet from the base of the pole. How high is the flagpole? Round to the nearest tenth if necessary.</p>  $15^2 + b^2 = 30^2$ $b = \sqrt{675}$ $b = 26 \text{ ft}$	<p>6. ENTERTAINMENT Isaac's television is 25 inches wide and 18 inches high. What is the diagonal size of Isaac's television? Round to the nearest tenth if necessary.</p>  $18^2 + 25^2 = c^2$ $\sqrt{949} = c$ $c = 30.8 \text{ in}$

Answers to Assignment on The Pythagorean Theorem (ID: 1)

1) $\sqrt{39}$ cm

5) $\sqrt{61}$ in

9) $\sqrt{145}$ ft

13) No

17) Yes

21) Right

25) Obtuse

29) Right

2) $5\sqrt{3}$ mi

6) $\sqrt{31}$ m

10) $\sqrt{2}$ yd

14) No

18) No

22) Obtuse

26) Acute

30) Obtuse

3) $2\sqrt{3}$ cm

7) $3\sqrt{21}$ in

11) No

15) No

19) No

23) Right

27) Acute

4) $3\sqrt{17}$ ft

8) $13\sqrt{2}$ mi

12) Yes

16) Yes

20) No

24) Obtuse

28) Acute