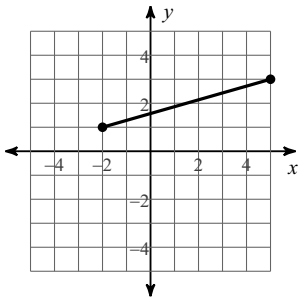
1.6 Pythagorean Theorem

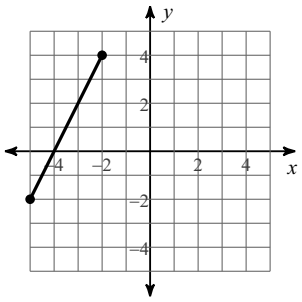
Date_____ Period____

Use the pythagorean theorem to find the distance between each pair of points. Express answers in simplest radical form.

1)

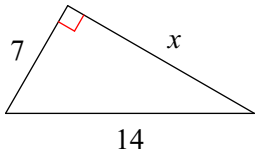


2)

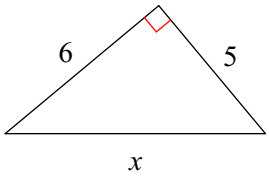


Find the missing side of each triangle. Leave your answers in simplest radical form.

3)



4)



Find the missing side of each right triangle. Side *c* is the hypotenuse. Sides *a* and *b* are the legs. Leave your answers in simplest radical form.

5) $a = 6,\ c = 14$

6) $b = 14,\ c = 20$

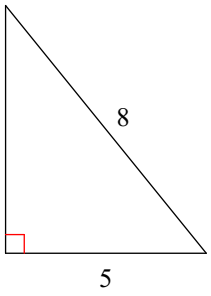
State if the three sides lengths form a right triangle.

7) $\sqrt{11},\ 2\sqrt{2},\ \sqrt{19}$

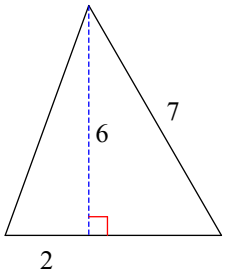
8) $\sqrt{337},\ 10,\ \sqrt{401}$

Find the area of each triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

9)



10)



11) In right triangle ABC hypotenuse AB = 2x-1, altitude BC = x, and base AC = x + 1. Find the length of BC.

12) In right triangle ABC CB = 8 and hypotenuse AB is 4 more than AC. Find AC.

Answers to 1.6 Pythagorean Theorem (ID: 1)

1) $\sqrt{53}$
2) $3\sqrt{5}$
3) $7\sqrt{3}$
4) $\sqrt{61}$
5) $4\sqrt{10}$
6) $2\sqrt{51}$
7) Yes
8) No
9) 15.5
10) 16.8
11) 3
12) 6