1. Given the following diagram, use the lettering provided to state three Pythagorean relations that apply.
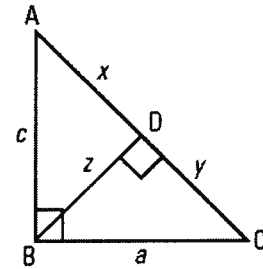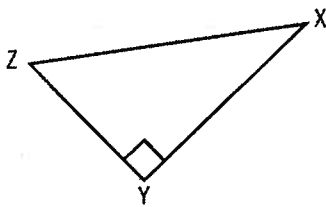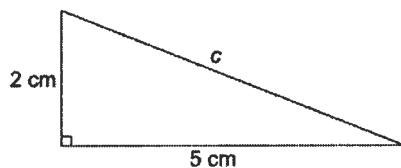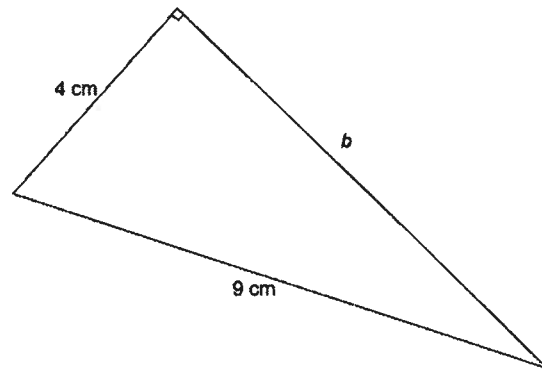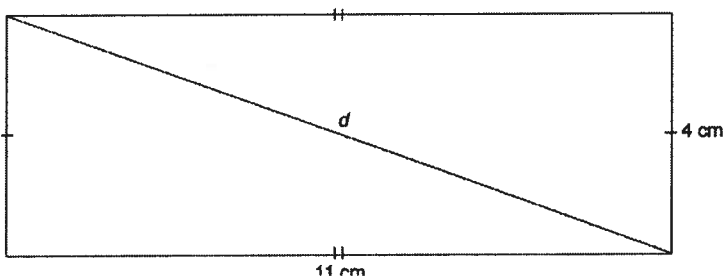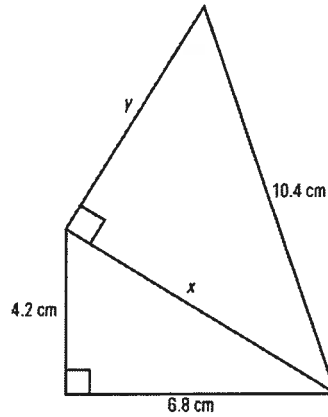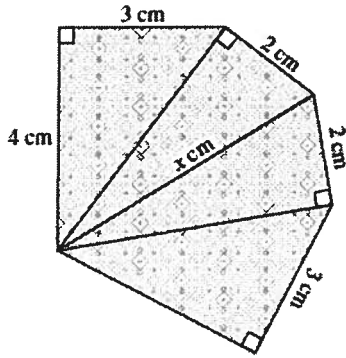
2. Label the triangles and then write the correct form of the Pythagorean Theorem for the triangles below.
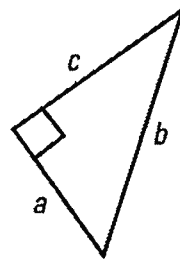
3. Find the sides of the missing triangles below.

11 cm

4 cm

4 cm

9 cm

b

2 cm

c

5 cm

4. Find the missing variables: (must do 2 calculations for each one)

5. Given three sides of the triangle determine if the following right triangles? (use Pythagorean theorem)

a) 7 cm, 7 cm, and 10 cm

b) 8 cm, 6 cm, and 10 cm

6. A 40-foot ladder reaches 38 feet up the side of a house. How far from the base of the house is the foot of the ladder?

7. A 28-metre long guy wire is attached to a point 24 m up the side of a tower. How far from the base of the tower is the guy wire attached?

8. A TV is advertised as being a 50" plasma. When you measure the screen, it measures 23" x 42". Is it REALLY 50" from corner to corner?

9. Jay Walker and his lady are standing at the corner of 12th and 56th. They want to walk to the opposite corner to get some TimBits. His girlfriend uses the crosswalks to get there, but Jay walks right through the intersection. How much farther did his girlfriend walk?
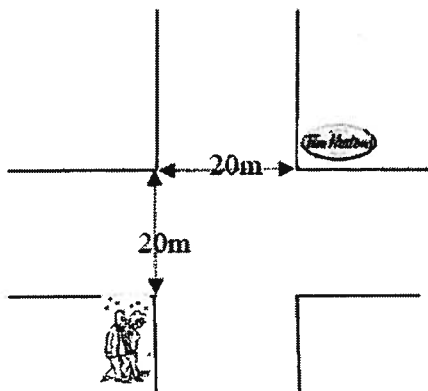
10. A boat sailed due north at a rate of 12 km/h for 3 hours, then due east at a rate of 18 km/h for 2 hours. How far was it from its starting point, measuring the shortest distance?