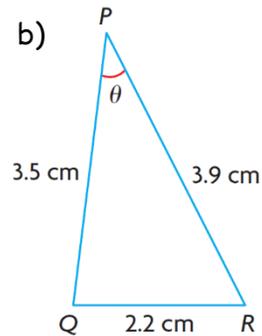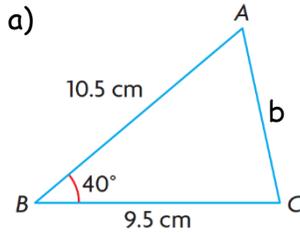# Cosine Law

1. Determine the unknown value in each diagram.

a)

b)

2. An ice cream company is designing waffle cones to use for serving frozen yogurt. The cross-section of the design has a bottom angle of 36°. The sides of the cone are 17 cm long. Determine the diameter of the top of the cone.

3. Two drivers leave home at the same time and travel on straight roads that diverge by 70°. One driver travels at an average speed of 83.0 km/h. The other driver travels at an average speed of 95.0 km/h. How far apart will the two drivers be after 45 min?

4. The bases in a baseball diamond are 90 ft apart. A player picks up a ground ball 11 ft from third base, along the line from second base to third base. Determine the angle that is formed between first base, the player's present position, and home plate. (Hint: Pythagoras will come in handy)