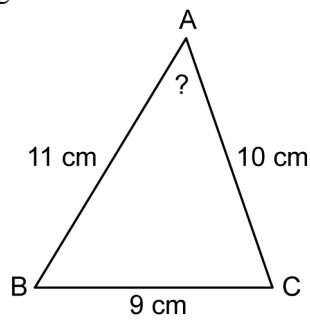


8.3 Cosine Law (Angles) Worksheet #2

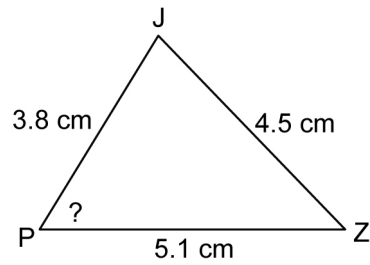
1. Solve for the indicated angle, to the nearest degree.

a)

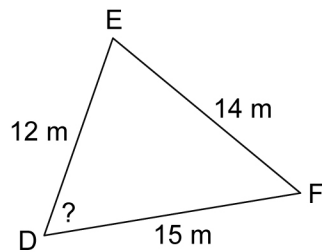


2. Solve for the indicated angle, to the nearest degree.

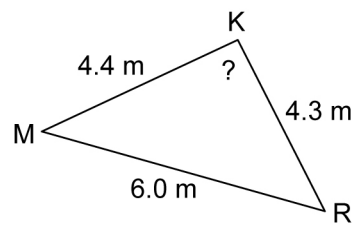
a)



b)



b)



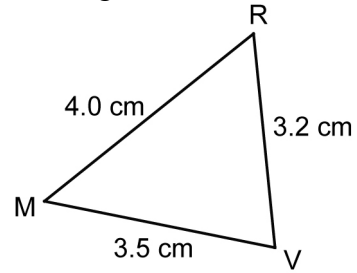
3. Sketch each triangle. Then, use the given information to find the indicated angle, to the nearest degree.

a) In acute $\triangle ABC$, $a = 3.4$ cm, $b = 4.1$ cm, and $c = 5.2$ cm. Find $\angle A$.

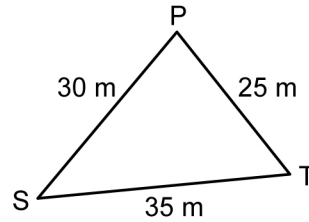
b) In acute $\triangle DEF$, $d = 22$ m, $e = 23$ m, and $f = 24$ m. Find $\angle E$.

4. Solve each triangle. Round answers to the nearest degree.

a)



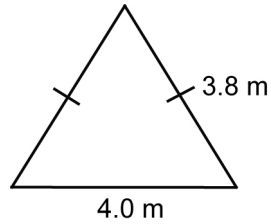
b)



5. Sketch each triangle and label it with the given information. Then, solve the triangle. Round your answers to the nearest degree.

a) In acute $\triangle DEF$, $d = 5.1$ cm, $e = 6.2$ cm, and $f = 7.3$ cm.

6. Laurissa is designing a reflecting pool, in the shape of a triangle, for her backyard.



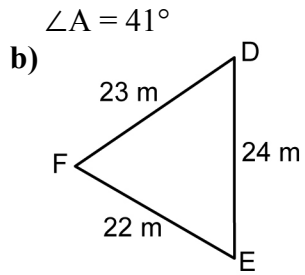
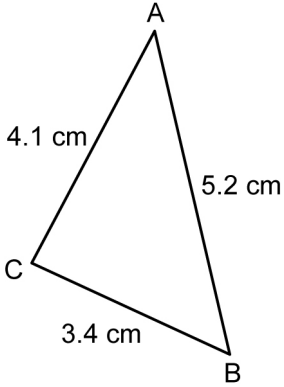
a) Find the interior angles of the reflecting pool, to the nearest degree.

b) In acute $\triangle PQR$, $p = 12$ m, $q = 14$ m, and $r = 16$ m.

b) Find the surface area of the water in the reflecting pool, to the nearest square metre.

Answers

1. a) $\angle A = 50^\circ$ b) $\angle D = 61^\circ$
 2. a) $\angle P = 60^\circ$ b) $\angle K = 87^\circ$
 3. a)



- $\angle E = 60^\circ$
4. a) $\angle M = 50^\circ, \angle R = 57^\circ, \angle V = 73^\circ$
 b) $\angle S = 44^\circ, \angle P = 78^\circ, \angle T = 58^\circ$
 5. a) $\angle D = 43^\circ, \angle E = 57^\circ, \angle F = 80^\circ$
 b) $\angle P = 47^\circ, \angle Q = 58^\circ, \angle R = 75^\circ$
 6. a) $58^\circ, 58^\circ, 64^\circ$ b) 6 m^2