

Unit 12 Review

State the number of possible triangles that can be formed using the given measurements.

1) $m\angle B = 22^\circ$, $a = 20$ km, $b = 16$ km

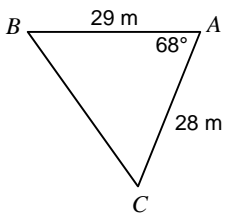
2) In $\triangle ABC$, $m\angle A = 157^\circ$, $c = 34$ mi, $a = 29$ mi

Solve each triangle. Round your answers to the nearest tenth.

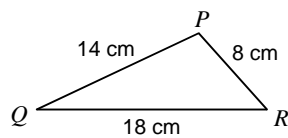
3) $m\angle B = 21^\circ$, $a = 24$ ft, $b = 20$ ft

4) In $\triangle YZX$, $m\angle Y = 133^\circ$, $m\angle X = 12^\circ$, $x = 4$ mi

5)



6)

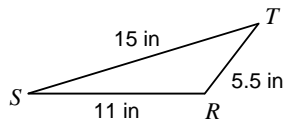


7) $b = 22$ cm, $a = 26$ cm, $c = 28$ cm

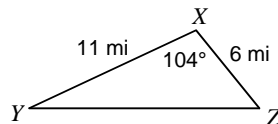
8) In $\triangle RST$, $s = 25$ cm, $t = 51$ cm, $m\angle R = 104^\circ$

Find the area of each triangle to the nearest tenth.

9)



10)

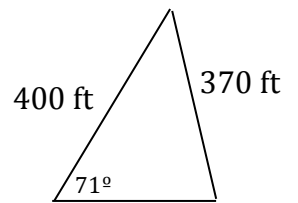


11) In $\triangle FDE$, $d = 16$ ft, $e = 10$ ft, $f = 10$ ft

12) In $\triangle PQR$, $m\angle P = 126^\circ$, $r = 7$ ft, $m\angle Q = 25^\circ$

Unit 12 Review Application

1. Airplane A is flying directly toward the airport that is 20 miles away. The pilot notices airplane B 45 degrees to her right. Airplane B is also flying directly toward the airport. The pilot of airplane B calculates that airplane A is 50 degrees to his left. Based on that information, how far is airplane B from the airport?
2. Matt measures the angle of elevation of the peak of a mountain as 35° . Susie, who is 1200 feet closer on a straight level path, measures the angle of elevation as 42° . How high is the mountain?
3. Brust becomes a real estate agent as a side gig. Bean is considering purchasing a piece of property and is waiting for Brust's surveying report before closing the deal. Brust submits a drawing of the plot similar to the figure below. Explain why Brust should be fired.



4. Brust submits a corrected drawing as shown below. Find the area of the plot of land.

