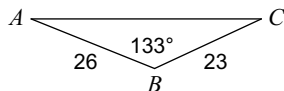


Test 6.2 - Law of Sines/Cosines

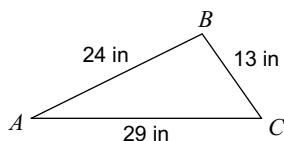
Date _____ Period _____

Find each measurement indicated. Round your answers to the nearest tenth.

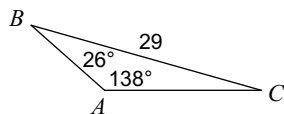
1) Find AC

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

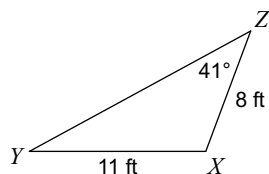
2)

3) In $\triangle CAB$, $c = 13$ m, $a = 21$ m, $b = 29$ m**Find each measurement indicated. Round your answers to the nearest tenth.**

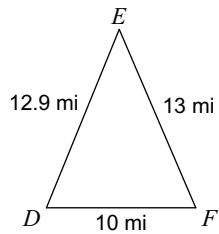
4) Find AC

**Solve each triangle. Round your answers to the nearest tenth.**5) $m\angle B = 35^\circ$, $a = 22$, $b = 21$ 6) In $\triangle PQR$, $m\angle Q = 14.5^\circ$, $m\angle R = 86.5^\circ$, $p = 35.4$ cm**State the number of possible triangles that can be formed using the given measurements.**7) $m\angle B = 33^\circ$, $b = 35$ m, $a = 23$ m**Find the area of each triangle to the nearest tenth.**

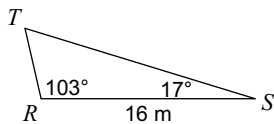
8)



9)



10)



- 11) During a figure skating routine, Jackie and Peter skate apart with an angle of 15° between them. Jackie skates for 5 meters and Peter skates for 7 meters. How far apart are the skaters to the nearest tenth of a meter?
- 12) A vertical flagpole is attached to the top edge of a building. A man stands 400 feet from the base of the building. From his viewpoint, the angle of elevation to the bottom of the flagpole is 60° ; to the top is 61.5° . Determine the height of the flagpole to the nearest tenth of a foot.
- 13) A softball diamond is a square 60 ft. on a side. The pitcher's mound is 43 ft from home. How far does the pitcher have to run to cover first?
- 14) The leaning tower of pisa is inclined 5.5 degrees from the vertical. At a distance of 100 meters from the wall of the tower, the angle of elevation to the top is 30.5 degrees. Use the law of sines to estimate the height of the leaning tower?

Answers to Test 6.2 - Law of Sines/Cosines (ID: 1)

- 1) 45 2) $m\angle C = 54.9^\circ, m\angle A = 26.3^\circ, m\angle B = 98.8^\circ$
3) $m\angle C = 24^\circ, m\angle A = 41^\circ, m\angle B = 115^\circ$ 4) 19
5) $m\angle C = 108.1^\circ, m\angle A = 36.9^\circ, c = 34.8$ 6) $m\angle P = 79^\circ, r = 36 \text{ cm}, q = 9 \text{ cm}$
 Or $m\angle C = 1.9^\circ, m\angle A = 143.1^\circ, c = 1.2$
7) One triangle 8) 41.2 ft^2 9) 59.7 mi^2 10) 42.1 m^2
11) 2.5 m 12) 43.9 ft 13) 42.4 ft 14) 56 m