Name: _____   Date: _____

Chapter 8 Test

1. To find ∠R in the following triangle, apply

17 cm

K ———————————— M
   59°

19 cm

R
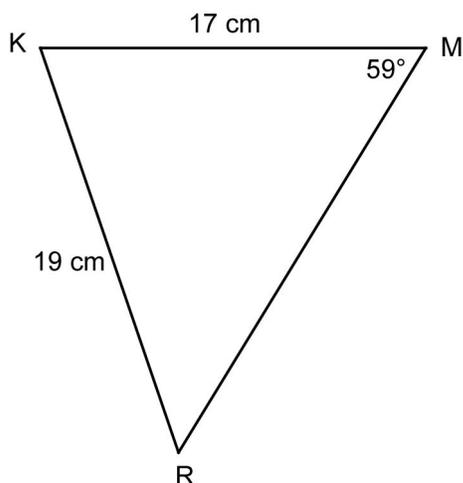
A the sine law
B the cosine law
C the tangent law
D the primary trigonometric ratios

2. The sine law states that
A $(\sin A)(\sin B) = (a)(b)$
B $a^2 = b^2 + c^2 - 2bc\sin A$
C $\dfrac{a}{\sin A} = \dfrac{b}{\sin B}$
D $\dfrac{a}{\sin B} = \dfrac{b}{\sin C}$

3. The angle of depression is
A measured above a horizontal line
B measured below a horizontal line
**C** equal to 90°
D equal to the angle of depression

4. To solve △QWZ, first apply

Q
17 m   57°
W
65°
Z
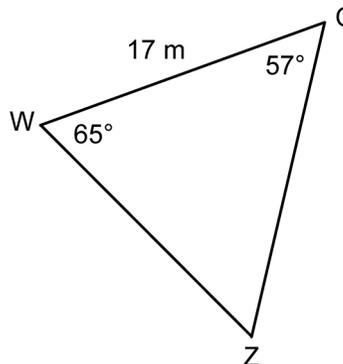
A the primary trigonometric ratios
B the tangent law
C the cosine law
D the sine law

5. The smallest angle in △DEF is

D
12 km   11 km
E   13 km   F
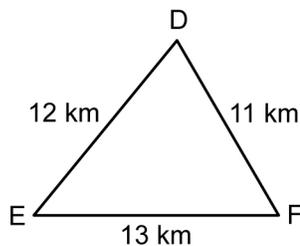
A ∠D
B ∠E
C ∠F
D impossible to determine

6. Find the length of the indicated side in each triangle, to the nearest tenth of a unit.
a)

L
$t = ?$ 13 cm
47°   71°
R   T

b)

87° at F, 15 mm from F to D, 17 mm from F to Q, f = ? along DQ
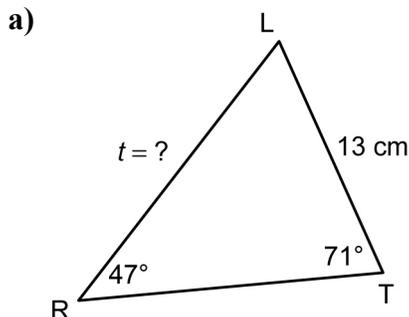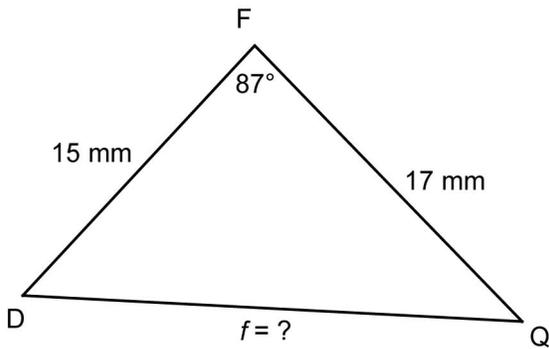
7. Find the measure of the indicated angle in each triangle, to the nearest tenth of a unit.

a)

57° at P, 6 cm from P to X, 7 cm from X to L, ? at L

b)

N at top, 11 cm from N to R, 12 cm from N to U, ? at U, 13 cm from R to U
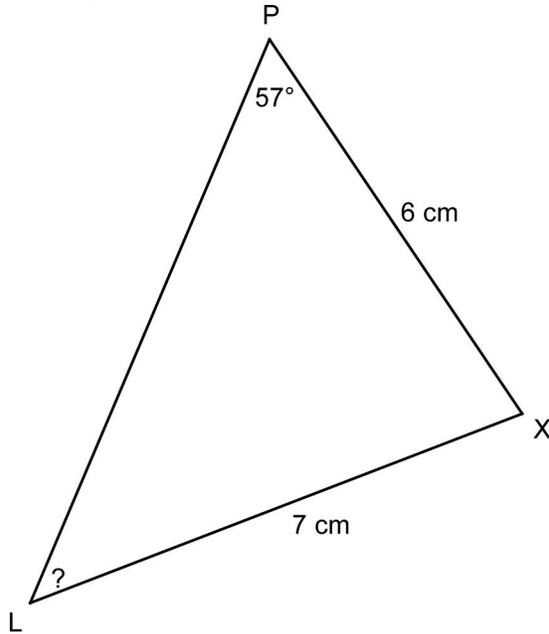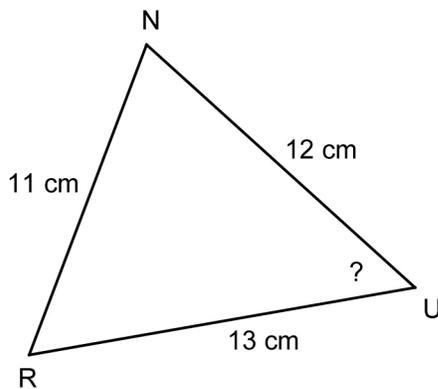
8. Use Technology Check your answers to question 7 using dynamic geometry software.

9. Draw a diagram and label the given information. Then, solve each triangle. Round answers to the nearest unit.
  a) In △KLM, ∠K = 54°, ∠L = 61°, and $k = 23$ m.
  b) In △ABC, $a = 14$ cm, $c = 16$ cm, and ∠B = 72°.

10. Use the measurements given in the diagram to find the length of the bridge, to the nearest metre.

D to A labeled "bridge", 34° at D, 85° at C, 67° at B, 100 m from A to B, right angle at A