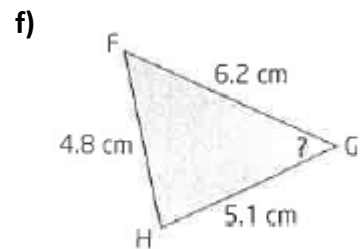
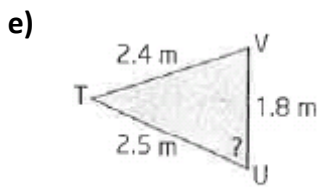
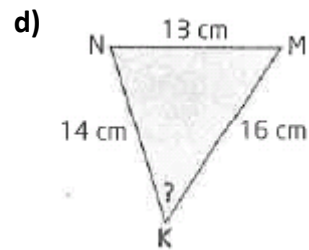
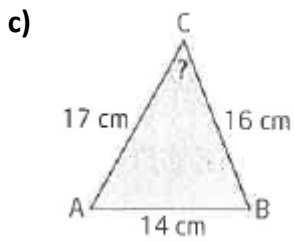
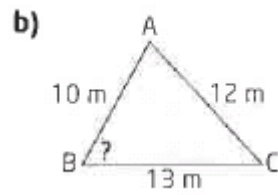
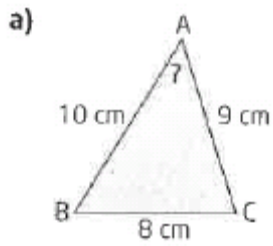


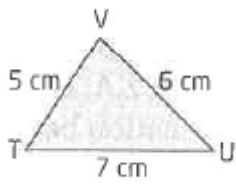
# 8.3 Cosine Law Homework

1. Find the measure of the indicated angle



## 2. Solve Each Triangle

a)



b)



c) Sketch the triangle and then solve it:

In acute  $\triangle NBG$ ,  $n = 15$  m,  $b = 14$  m,  
and  $g = 12$  m.

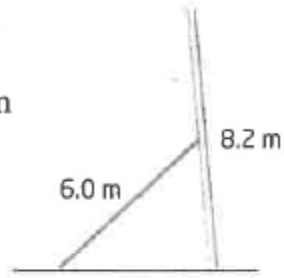
d) Sketch the triangle and then solve it:

In acute  $\triangle DRT$ ,  $d = 5.0$  km,  $r = 3.8$  km,  
and  $t = 4.6$  km.

3.

A leaning pole is braced at its midpoint, as shown. The pole is 8.2 m long, and the bracing beam is 6.0 m long.

The foot of the beam is placed 5.0 m from the base of the pole.



Determine, to the nearest degree,

- the angle the pole makes with the ground
- the angle the beam makes with the ground
- the angle the beam makes with the pole

## Answers:

1) a) 49 b) 61 c) 50 d) 51 e) 66 f) 49

2) a)  $V=78.5$   $T=57.1$   $U=44.4$  b)  $M=70.8$   $P=59$   $Y=50.2$

c)  $N=70$   $B=61.3$   $G=48.7$  d)  $D=72.3$   $T=61.2$   $R=46.5$

3) a) 82 b) 43 c) 55