

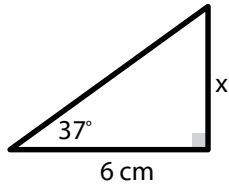
**Apprenticeship Math 12**  
**ASSIGNMENT: Mixed Trig Ratios**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

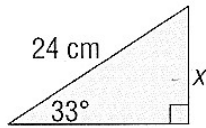
1. Find the length of the indicated side (x). Round your answers to the nearest tenth.

a)



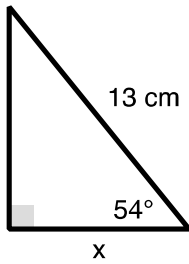
\_\_\_\_\_

b)



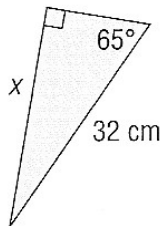
\_\_\_\_\_

c)



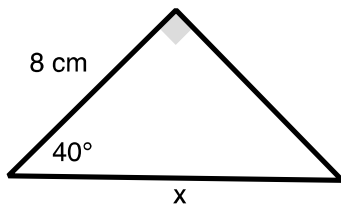
\_\_\_\_\_

d)



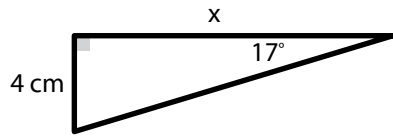
\_\_\_\_\_

e)



\_\_\_\_\_

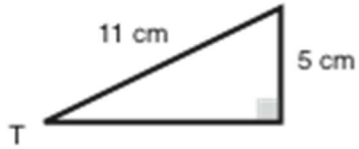
f)



\_\_\_\_\_

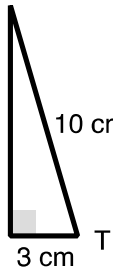
2. Find the indicated angle (T). Round your answers to the nearest degree.

a)



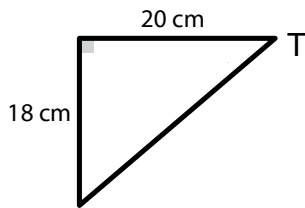
\_\_\_\_\_

b)



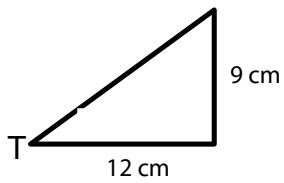
\_\_\_\_\_

c)



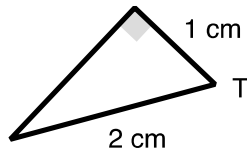
\_\_\_\_\_

d)



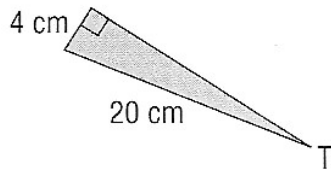
\_\_\_\_\_

e)



---

f)



---

*For each of the following questions, draw and label a diagram. Show your work.*

3. How far from the base of a flagpole must a support wire be fixed if the wire is 12 metres long and it makes an angle of  $63^\circ$  with the ground? Round your answer to the nearest hundredth.

---

4. A ladder is leaning against the side of a house. The bottom of the ladder is 5 feet away from the house and the top of the ladder reaches a window that is 12 feet above the ground. What angle does the ladder make with the ground? Round your answer to the nearest degree.

---

5. A weather balloon is attached to a 15-metre string that makes an angle of  $35^\circ$  with the ground. How high above the ground is the weather balloon? Round your answer to the nearest tenth.
- 

- |    |               |
|----|---------------|
| 1. | a) 4.5 cm     |
| 2. | a) $27^\circ$ |
|    | b) $73^\circ$ |
|    | c) $42^\circ$ |
|    | d) $37^\circ$ |
|    | e) $60^\circ$ |
|    | f) $12^\circ$ |
| 3. | 5.45 m        |
|    | e) 10.4 cm    |
|    | f) 13.1 cm    |
| 4. | $67^\circ$    |
| 5. | 8.6 m         |