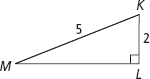
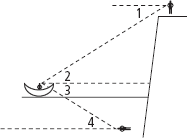
**Objective:**

**Do Now: Find *m***∠***M* to the nearest degree.**

1. 10 b. c.

**Guided Practice: Angle of Elevation and Depression**

Angle of Elevation –

Angle of Depression – 

**Describe each angle as it relates to the diagram to the right.**

|  |  |  |  |
| --- | --- | --- | --- |
| **1.** | **2.** | **3.** | **4.** |
|  |  |  |  |

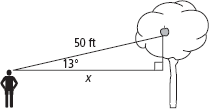
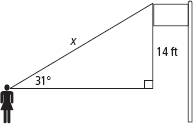
**Example 1**

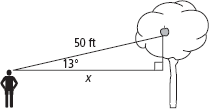
A woman stands 25 feet from a tree. She looks up at an angle of 57° to see the top of the tree. Her eye level is 5 feet above the ground.

(a) Draw a diagram that represents the problem. Show the known quantities

(b) What is vertical distance between the eye level and the top of the tree to the nearest foot ?

(c) How tall is the tree to the nearest foot?

**Example 2**

1. Find the distance x from the man to the tree trunk.
2. Assume that the man’s eye sight is 6 feet tall. How tall is the tree?

**Group Practice:**

Given the diagram below, find all side length and angle measures possible.

