Application Notes

**Draw a Picture:**

When solving math problems, it can be very helpful to draw a picture of the situation if none is given.

**Here is an example.**

Find the missing sides and angles for Triangle FRY. Given that angle Y is the right angle, YR = 68, and FR = 88.

The picture helps to visualize what we know and what we want to find.

**Example 1:**

From a point 80m from the base of a tower, the angle of elevation is 28˚. How tall is the tower?



**Example 2:**

A ladder that is 20 ft is leaning against the side of a building. If the angle formed between the ladder and ground is 75˚, how far is the bottom of the ladder from the base of the building?



**Example 3:**

When the sun is 62˚ above the horizon, a building casts a shadow 18m long. How tall is the building?



 

**Example 4:**

A kite is flying at an angle of elevation of about 55˚. Ignoring the sag in the string, find the height of the kite if 85m of string have been let out.



**Example 5:**

A 5.50 foot person standing 10 feet from a street light casts a 14 foot shadow. What is the height of the streetlight?

  ![j0433700[1]]()

Example 6:

The angle of depression from the top of a tower to a boulder on the ground is 38º. If the tower is 25m high, how far from the base of the tower is the boulder?

 