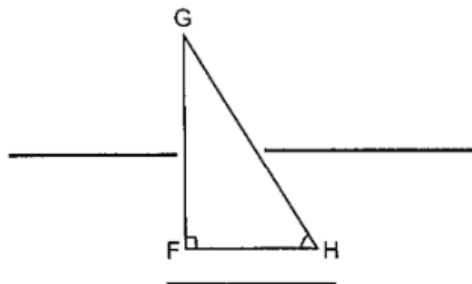


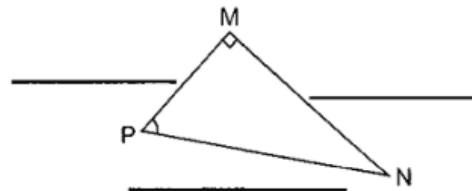
## Practice

1. Label the hypotenuse, opposite, and adjacent sides of each right triangle in relation to the given angle.

a)  $\angle H$

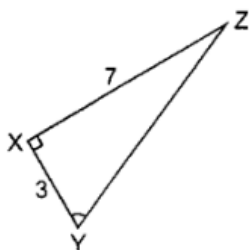


b)  $\angle P$



2. Find the tangent ratio for each indicated angle. Leave the ratio in fraction form.

a)

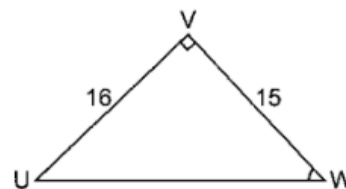


The side opposite  $\angle Y$  is \_\_\_\_\_.  
The side adjacent to  $\angle Y$  is \_\_\_\_\_.

$$\tan Y =$$

$$\tan Y =$$

b)



The side opposite  $\angle W$  is \_\_\_\_\_.  
The side adjacent to  $\angle W$  is \_\_\_\_\_.

$$\tan W =$$

$$\tan W =$$

3. Find the measure of  $\angle A$  for each value of  $\tan A$ . Give your answer to the nearest degree.

a)  $\tan A = 0.5$

$$\angle A = \tan^{-1}(\text{_____}) \quad \text{Use a calculator.}$$

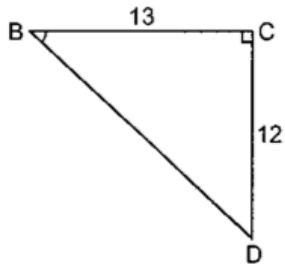
$$\angle A \doteq \text{_____}$$

b)  $\tan A = \frac{5}{6}$

$$\angle A = \text{_____}$$

$$\angle A \doteq \text{_____}$$

4. Find the measure of  $\angle B$  to the nearest degree.



The side opposite  $\angle B$  is \_\_\_\_\_.  
 The side adjacent to  $\angle B$  is \_\_\_\_\_.

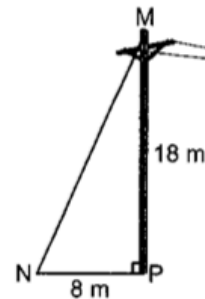
$\tan B =$  \_\_\_\_\_

$\tan B =$  \_\_\_\_\_

$\angle B \doteq$  \_\_\_\_\_

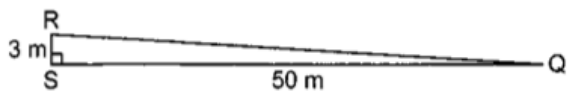
5. A telephone pole is supported by a wire, as shown.  
 What angle, to the nearest degree, does the wire make with the ground?

We want to find the measure of  $\angle N$ .  
 Use the tangent ratio.



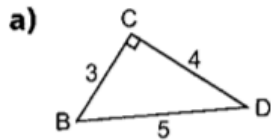
The angle between the ground and the wire is about \_\_\_\_\_.

6. Victor is building a wheelchair ramp to an entranceway that is 3 m above the sidewalk.  
 The ramp will cover a horizontal distance of 50 m. What angle, to the nearest degree,  
 will the ramp make with the ground?

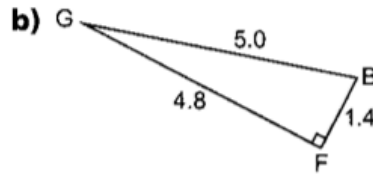


The angle between the ground and the ramp is about \_\_\_\_\_.

1. Fill in the blanks.



The side opposite  $\angle B$  is \_\_\_\_\_.  
 The side adjacent to  $\angle B$  is \_\_\_\_\_.  
 The hypotenuse is \_\_\_\_\_.



The side opposite  $\angle B$  is \_\_\_\_\_.  
 The side adjacent to  $\angle B$  is \_\_\_\_\_.  
 The hypotenuse is \_\_\_\_\_.

2. For each triangle in question 1, find  $\sin B$  and  $\cos B$  as decimals.

**a)**  $\sin B =$

$\cos B =$

$\sin B =$

$\cos B =$

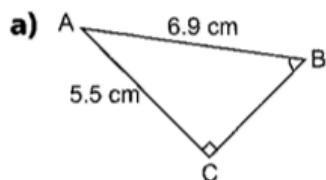
**b)**  $\sin B =$  \_\_\_\_\_

$\cos B =$  \_\_\_\_\_

$\sin B =$  \_\_\_\_\_

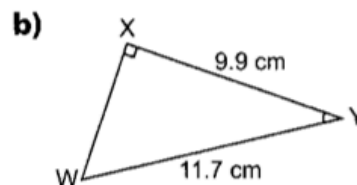
$\cos B =$  \_\_\_\_\_

3. Find the measure of each indicated angle to the nearest degree.



AC is the \_\_\_\_\_.  
 AB is the \_\_\_\_\_.  
 So, use the \_\_\_\_\_ ratio.

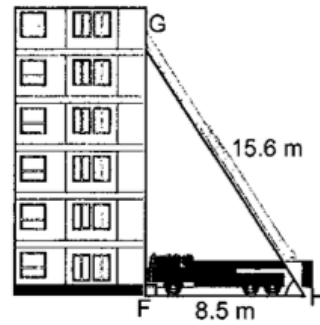
$\angle B \doteq$  \_\_\_\_\_



XY is the \_\_\_\_\_.  
 WY is the \_\_\_\_\_.  
 So, use the \_\_\_\_\_ ratio.

$\angle Y \doteq$  \_\_\_\_\_

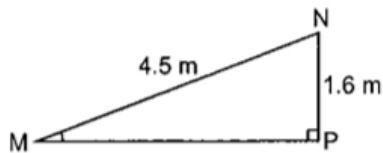
4. A firefighter rests a 15.6-m ladder against a building, as shown.  
 What angle does the ladder make with the ground?  
 Give your answer to the nearest degree.



We want to find the measure of  $\angle H$ .  
 FH is the \_\_\_\_\_.  
 GH is the \_\_\_\_\_.  
 So, use the \_\_\_\_\_ ratio.

The angle the ladder makes with the ground is about \_\_\_\_\_.

5. A loading ramp is 4.5 m long. The top of the ramp has height 1.6 m.  
 What angle does the ramp make with the ground?  
 Give your answer to the nearest degree.



The angle the ramp makes with the ground is about \_\_\_\_\_.

