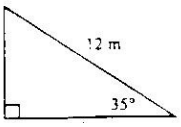
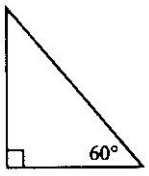
WS 10-2-4 "APPLYING TRIG RATIOS"

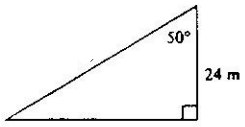
TRIGONOMETRY UNIT

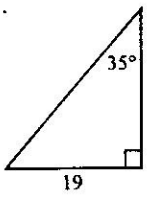
Name:_____ Block: _____ Date: _____

1. Solve the following right triangles, given one side and one acute angle.

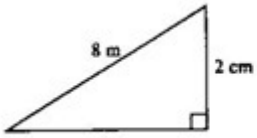
a. 

c. 

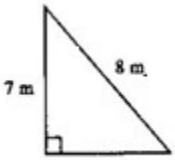
b. 

d. 

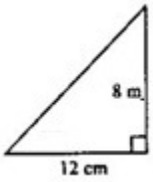
2. Solve the following triangles, given two side lengths.



a.

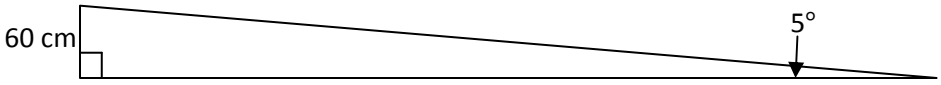


b.



c.

3. A designer draws this diagram of a wheelchair ramp for a building.



a. Find the length of the ramp, to the nearest hundredth of a centimeter.

b. Find the horizontal distance the ramp will take up to the nearest hundredth of a centimeter.

WS 10-2-4 "APPLYING TRIG RATIOS"

TRIGONOMETRY UNIT

Name:_____ Block: _____ Date: _____

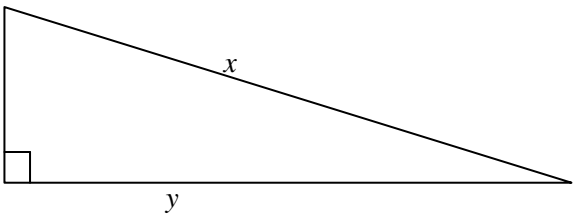
4. A plane leaves the airport and flies 150 km due west to pick up supplies. It then flies 300 km due north to a mining camp. When the plane is at the mining camp:
   a. how far is it from its airport to the nearest km?
   b. what is the measure of the angle between the path it took due north and the path it will take to return directly to the airport? Write the angle to the nearest degree.

5. In $\triangle ABC$, $\angle C = 90°$, AB = 12 cm and AC = 10 cm. Calculate the measure of $\angle ABC$.

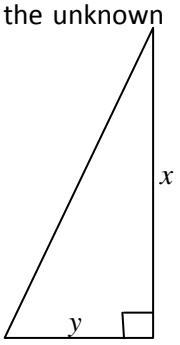
6. In $\triangle XYZ$, $\angle Z = 90°$, XY = 12 cm and $\angle Y$ = 10°. Calculate the length of side YZ.

7. Using a ruler, measure the length of side x. Using a protractor, measure one of the unknown angles. Use a trig ratio to determine the length of side *y*.

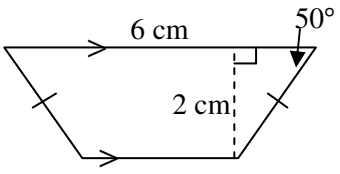
   a.



   b.



8. Calculate the perimeter and area of this isosceles trapezoid to the nearest tenth.



9. A mirror has the shape of a regular decagon. The distance from one vertex to the opposite vertex, measured through the centre of the mirror, is approximately 50 cm. Determine the perimeter of mirror to the nearest tenth of a cm.