

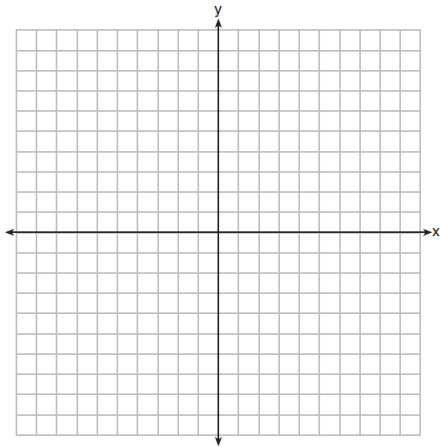
Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Geometry  
Review  
Graded Homework 11

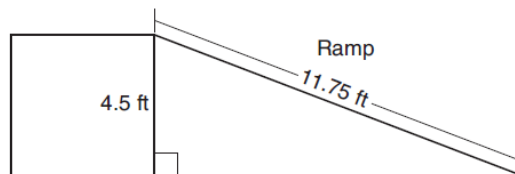
Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.  
NO WORK = ZERO CREDIT

1) [3]

The coordinates of the endpoints of  $\overline{AB}$  are  $A(-6, -5)$  and  $B(4, 0)$ . Point  $P$  is on  $\overline{AB}$ . Determine and state the coordinates of point  $P$ , such that  $AP:PB$  is 2:3.



2) [3] The diagram below shows a ramp connecting the ground to a loading platform 4.5 feet above the ground. The ramp measures 11.75 feet from the ground to the top of the loading platform.



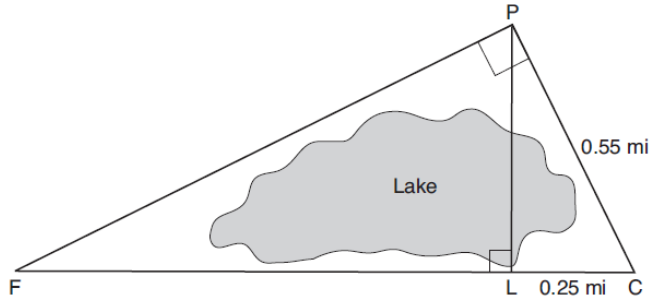
Determine and state, to the *nearest degree*, the angle of elevation formed by the ramp and the ground.

3) [3] Find the equation of a perpendicular bisector to the segment with endpoints  $(4, -2)$  and  $(-5, -4)$

4) [4] A flagpole casts a shadow 16.60 meters long. Tim stands at a distance of 12.45 meters from the base of the flagpole, such that the end of Tim's shadow meets the end of the flagpole's shadow. If Tim is 1.65 meters tall, determine and state the height of the flagpole to the *nearest tenth of a meter*.

5) [3]

In the diagram below, the line of sight from the park ranger station,  $P$ , to the lifeguard chair,  $L$ , on the beach of a lake is perpendicular to the path joining the campground,  $C$ , and the first aid station,  $F$ . The campground is 0.25 mile from the lifeguard chair. The straight paths from both the campground and first aid station to the park ranger station are perpendicular.



Gerald believes the distance from the first aid station to the campground is at least 1.5 miles. Is Gerald correct? Justify your answer.

6) [3] In right triangle THG,  $\angle H$  is a right angle. Altitude HP is drawn and cuts the hypotenuse into two pieces.  $TP = 6$  and  $PG = 10$ . Find  $m\angle T$  to the nearest hundredth.

7) [4] Isosceles triangle KFE has vertex angle E.  $KE = x^2 - 2x + 3$ ,  $KF = x^2 - 6x + 19$  and  $FE = 2x^2 - 5x - 25$ . Find the area of triangle KFE