homework

Determining Slope from a Graph

Another word for the "constant rate of change" of a line is slope.   Slope (m) = $\frac{vertical\ change}{horizontal\ change}$ = $\frac{rise}{run}$

Steps to Determining the Slope of a Line:

Step 1: Determine if the slope is positive (the line is rising) or negative (the line is falling)

Step 2: Find two points on the line

Step 3: Count how much the graph is rising or falling from one point to the next *(change in y)*

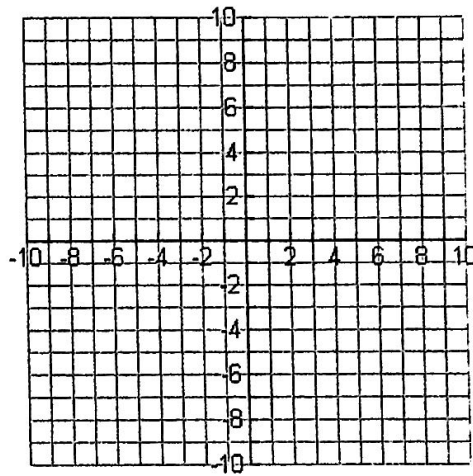Step 4: Count how much the graph is running from one point to the next *(change in x)*

Step 5: Write slope as a rate of change in **simplest form**: m = $\dfrac{rise}{run}$ = rate of change

Examples   Determine the slope of the lines formed by graphing the ordered pairs below and label as positive, negative, zero, or no slope.
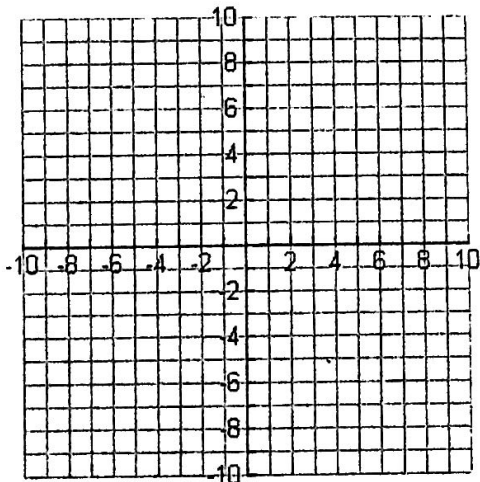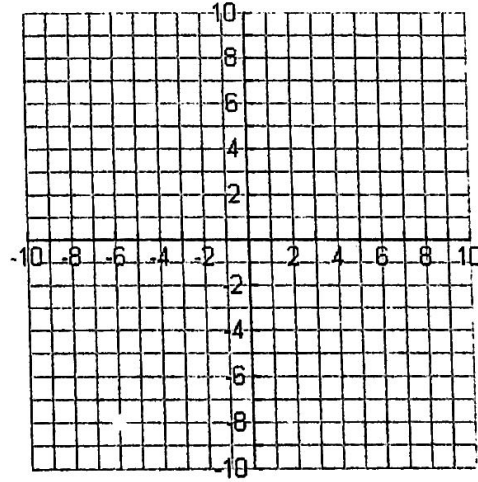
1.   (1, 2), (3, 6)

2.   (2, 6), (4, 0)
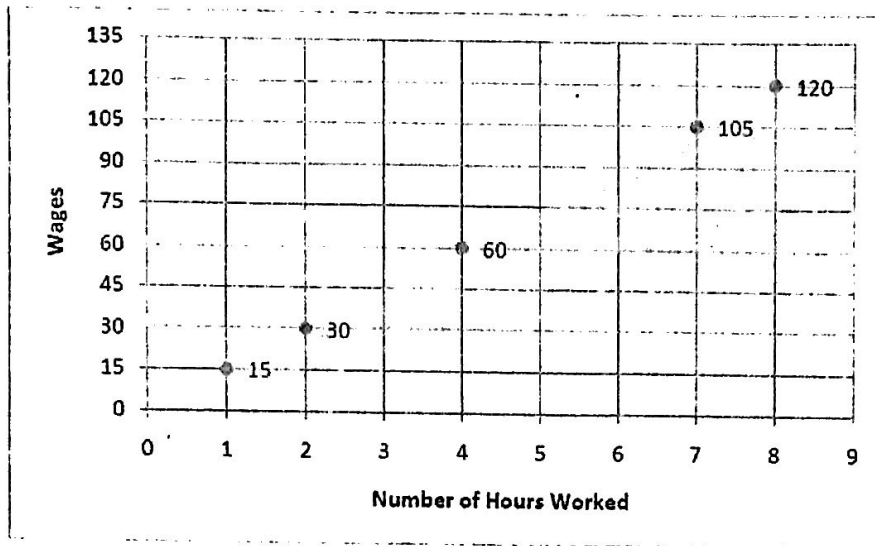
3.   (8, −4), (−6, −4)

4.   (7, 1), (7, 8)

Name _____
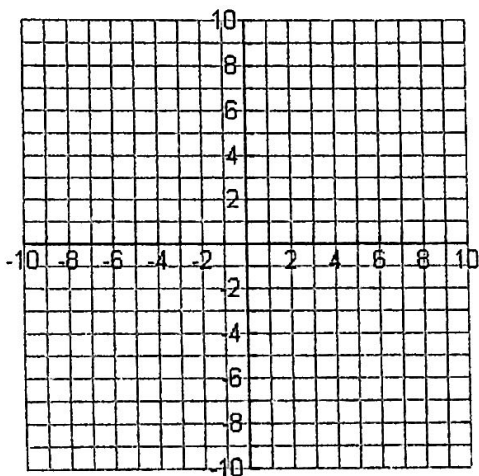
Triangles Task

The data shown in the graph below reflects average wages earned by machinists across the nation.

1. What hourly rate is indicated by the graph? Explain how you determined your answer.

2. What is the *ratio of the height to the base* of the small, medium and large triangles?
   Make sure to consider the scale of the graph.

   small = ——   medium = ——   large = ——

   What patterns do you observe?

3. What is the slope of the line formed by the data points in the graph? Explain how you know.

4. What is the unit rate for the proportional relationship represented by the graph?   How does this
   relate to the slope?

5. According to the graph, in a 40-hour week, how much will the average machinist earn? How do you
   know?