Name:_____

# Industrial Revolution Math Project

This project is to help compare the income of the textile workers in the industrial revolution to modern careers and jobs. We will look at different workers from the industrial revolution and today to look for similarities and differences.

In the industrial revolution, there were mill workers, mill managers, inventors, and other professions. Mill workers worked 14- 16 hours per week, up to 52 weeks a year, and several days a week. The workers of the mill made approximately 10 cents per hour. Is the year 1800 $1 would be worth $17.60 and in 1825 $1 would be worth 22.40. A mill manager made $4,400 a year.

Part 1

1. Determine how much a mill worker would earn in a year if they worked 50 weeks a year, 6 days a week, and 14 hours a day earning ten cents an hour?

    a. How much would that be worth in USD today if you worked in 1800?

    b. How much would that be worth in USD today if you worked in 1825?

2. Determine how much a mill worker would earn in a year if they worked 51 weeks a year, 6 days a week, and 15 hours a day earning ten cents an hour?

    a. How much would that be worth in USD today if you worked in 1800?

    b. How much would that be worth in USD today if you worked in 1825?

Name:_____

3. Determine how much a mill worker would earn in a year if they worked 52 weeks a year, 6 days a week, and 16 hours a day earning ten cents an hour?

    a. How much would that be worth in USD today if you worked in 1800?

    b. How much would that be worth in USD today if you worked in 1825?

4. If mill managers made $4,400 in the 1800's, how much would they make today?

    a. How much would they earn per hour if they worked 51 weeks a year, 6 days a week, and 14 hours a day?

    b. How much would they earn per hour if they worked 50 weeks a year, 5 days a week, and 8 hours a day?

5. Minimum wage is massachusetts is $11 an hour.

    a. Determine how much that would be in the year 1800?

    b. Determine how much that would be in the year 1825?

    c. If someone works 50 weeks a year, five days a week, and 8 hours a day, how much would they earn in a year?

6. The equation of a mill worker can be modeled by $y = 10x$, Where y is the total outcome and x is the number of weeks that they have worked.
    a. What does the number 10 represent?

    b. What is the y-intercept

Name:_____

7. The equation of an inventor can be modeled at $y = 20x - 100$, Where y is the total outcome and x is the number of weeks that they have worked.
    a. What does the number 20 represent?

    b. What is the y-intercept?

8. Graph the two equations on the graph provided. Do the mill worker in red colored pencil and the inventor in blue colored pencil.
    a. Be careful of your scaling with the scale of the graph.
    b. The graph for this is on a separate piece of paper.
    c. After how many weeks of work will the mill worker and the inventor make the same amount of money? (use the graph)(graph accurately)

    d. How much money is earned when they pass each other?

9. Pick a profession. Any profession of your choosing.(Put profession in the space below).

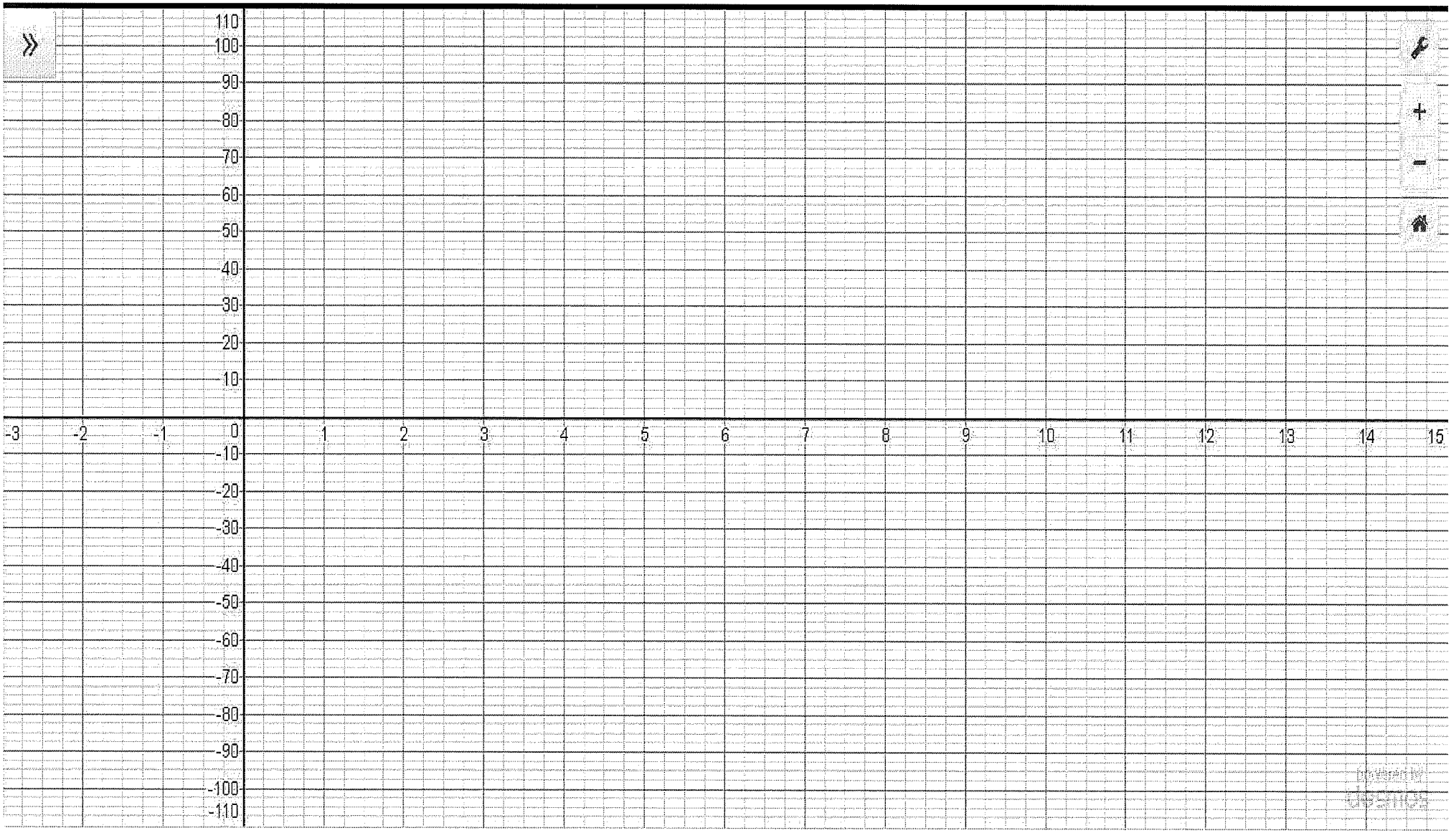
    a. Determine how much that profession earns per hour.

    b. How much would that profession earn in 1800?

    c. How much would that profession earn in 1825?

Name:_____

10. Do you think the wages were fair in the early 1800's? Explain your answer thoroughly.


110
100
90
80
70
60
50
40
30
20
10
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110