MFM2P – Equations of Lines – Day 1: Consolidation

The following data was collected on student absences and final grades in a math course.

(Absences, Final Mark)

(10, 72), (15, 65), (1, 55), (20, 45), (3, 82), (5, 79), (1, 92), (20, 85),

(11, 60), (7, 75), (12, 76), (2, 90), (18, 48), (4, 88), (9, 83), (3, 78)

1. What is the independent variable? ___Number of Absences___

2. What is the dependent variable? ___Final Mark (%)___

3. Create a properly labeled table of values for the data.
4. Create a properly labeled scatter plot of the data **including a line of best fit**.

Number of Absences	Final Mark (%)
10	72
15	65
1	55
20	45
3	82
5	79
1	92
20	85
11	60
7	75
12	76
2	90
18	48
4	88
9	83
3	78

A Scatter Plot of Number of Absences vs. Final Mark

* rise is negative

rise = 36

$\frac{36}{9} = 4$

run

Number of Absences
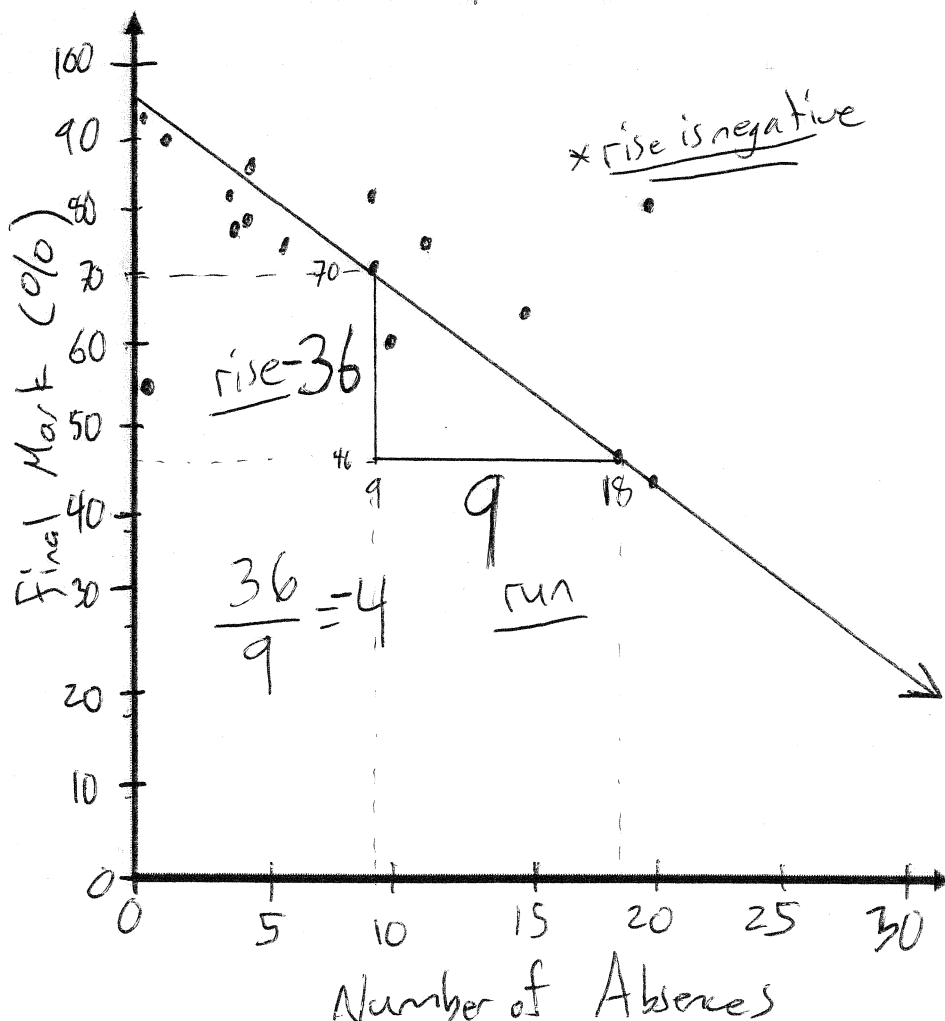
5. Using a 'rate triangle' calculate the rate of change of your line of best fit. $\frac{-36}{9} = -4\%$ per absence

6. Interpret the meaning of the rate of change as it relates to this activity.

This suggests that for each class you miss your grade <u>decreases</u> by 4%.

7. At what value does the line cross the y-axis? 95

8. Interpret this value in the context of this activity.

If you miss no class, your mark will be approximately 95%.

9. At what value does the line cross the x-axis? ~45 (estimate)

10. Interpret this value in the context of this activity.

After 45 absences your mark will be 0%.

11. Write a paragraph about this activity using as many terms as possible from your **Unit Definitions** page.