Grade 9 Math
Unit 3 - The Line
Outcomes: B15, C1, C2, C3, C4, C5, F2

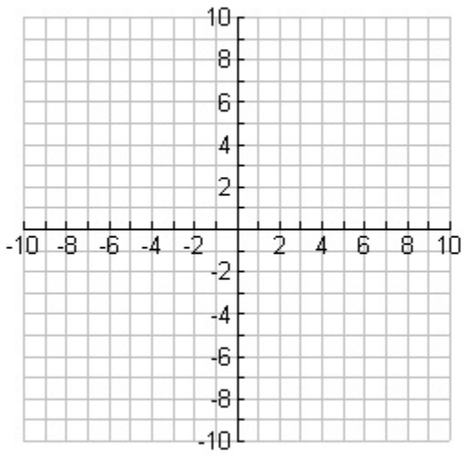
Name:_____

Part 2: Constructed Response.

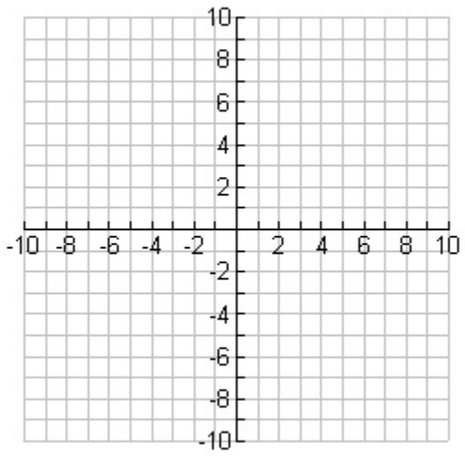
Answer all questions and show all workings.

1. Graph the following lines on the graph paper provided.

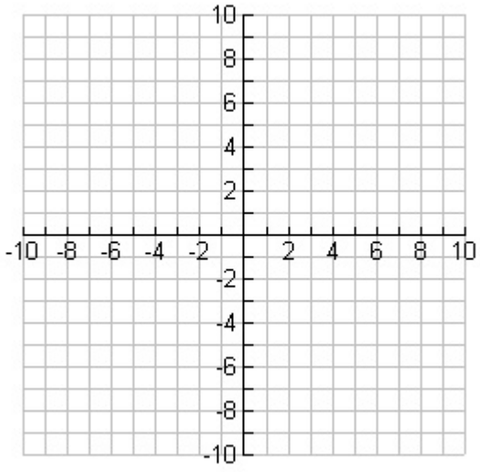
A) $y = -\frac{2}{3}x + 6$ **(3)**



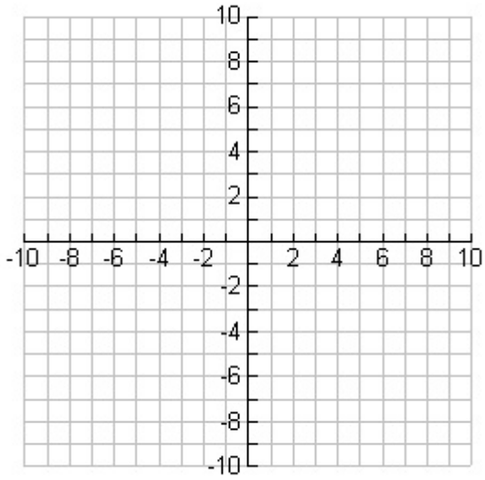
B) $y = -4$ **(2)**



C) a line that passes through $(-6,-8)$ and has a slope $\frac{3}{5}$ **(3)**



D) a line that has an x-intercept of -4 and a slope of $-\frac{6}{5}$ **(3)**



2. Your school is planning a field trip to Gros Morne National Park. The cost of the trip is a flat fee of $500 plus $50 per student.

A Let ***C*** represent the total cost of the trip and ***n*** represent the number of students. Write an equation to relate ***C*** and ***n***.

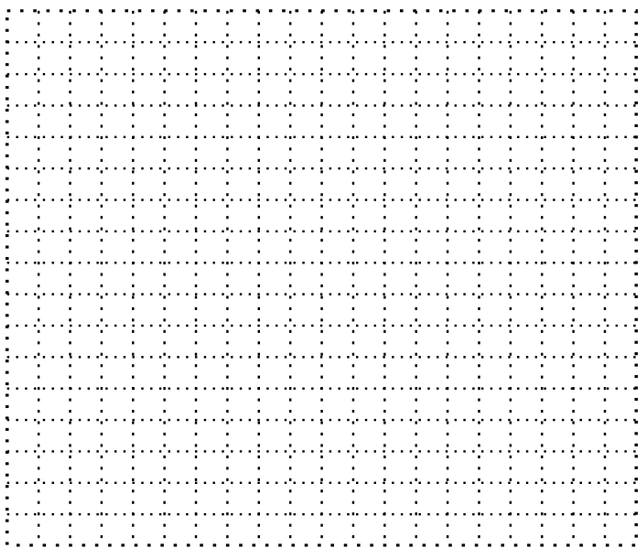
(2)

B Create a table of values which describes the relation between the number of kilometers and the cost of the car rental. **(3)**

Number of students	0	5	10	15	20	25
Cost ($)						

C Draw a graph of the relationship. **Be sure to state what each axis represents.**

(4)



D Find the total cost if the 79 student went on the trip. **(3)**

E What is the C-intercept and what does it represent? **(2)**

F What is the slope and what does it represent? What are the units for the slope? **(3)**

G How would the graph and equation change if the flat fee was increased to $600?

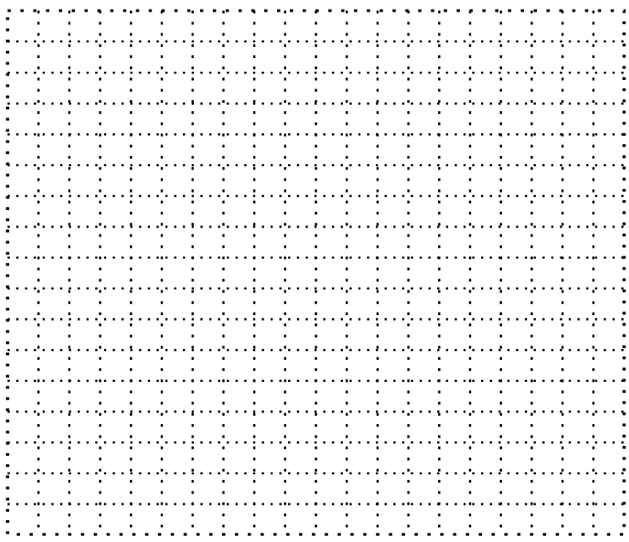
(2)

H How would the graph and the equation change if the charge per student was increased by $10? **(2)**

3. Water was heated for 4 minutes with the temperature being recorded every 1 minute.

Time (in minutes)	Temperature (^oC)
0	18
2	24
4	30
6	36
8	42

A) Plot the data from the table and draw a graph. **(4)**



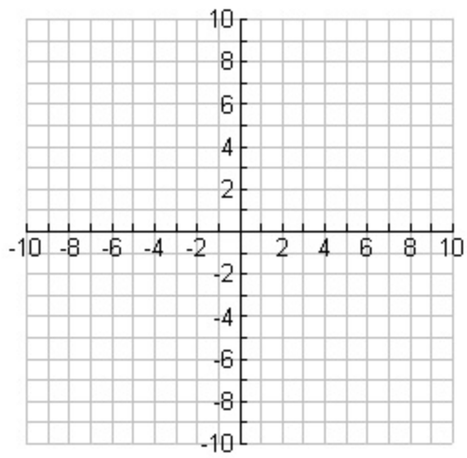
B) Calculate the slope of the graph? What does it represent? **(3)**

C) What is the y-intercept and what does it represent? **(2)**

D) Write an equation to represent the relationship between the temperature of the water and the time. Let ***T*** represent the temperature and ***m*** represent the time in minutes. **(2)**

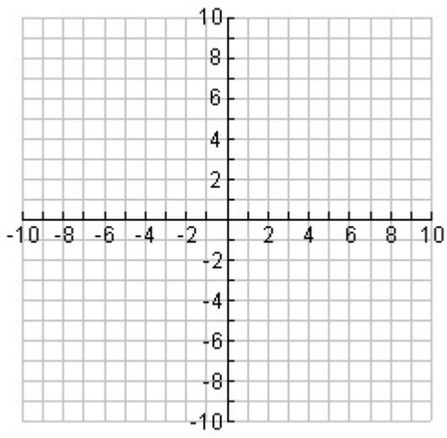
4. Graph each line and then state the equation of each line. **(8)**

A) a line passes through the points $(4,2)\ and\ (-2,-1)$



Equation_____

B) a line has a slope of $\frac{2}{5}$ and passes through $(-5,-2)$



Equation_____