Important Review of Analytic Geometry

1. Plot the following points on the provided grid.

(a) $A(2,5)$

(b) $B(-2,5)$

(c) $C(2,-5)$

(d) $D(-2,-5)$

(e) $E(-10,10)$

(f) $F(10,-5)$

(g) $G(-4,7)$

(h) $H(8,-5)$

(i) $I(-9,-6)$

2. Calculate the slope of each of the following line segments.

(a) AB _____

(b) CD _____

(c) EF _____

(d) GH _____

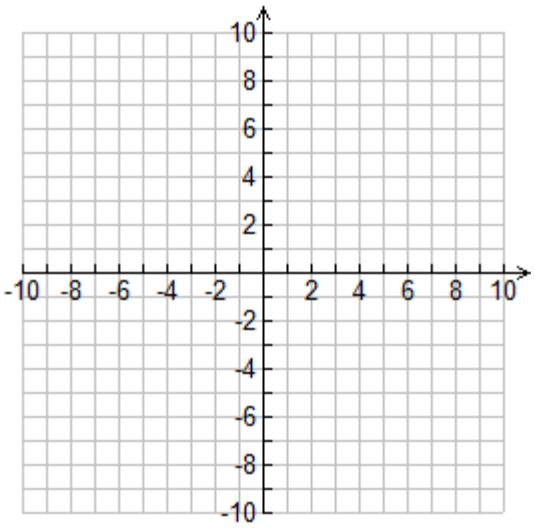
(e) IA _____

(f) BC _____

(g) DE _____

(h) FG _____

(i) HI _____



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3. Use the values in the given tables to plot the graphs of the given relations.

Relation A	
x	y
0	−6
1	−3
2	0
3	3
4	6

Relation B	
x	y
−4	10
−2	−2
0	−6
2	−2
4	10

4. Classify each relation in 3 as linear or non-linear. In addition, write an equation for each of the relations.

<u>Relation A</u>

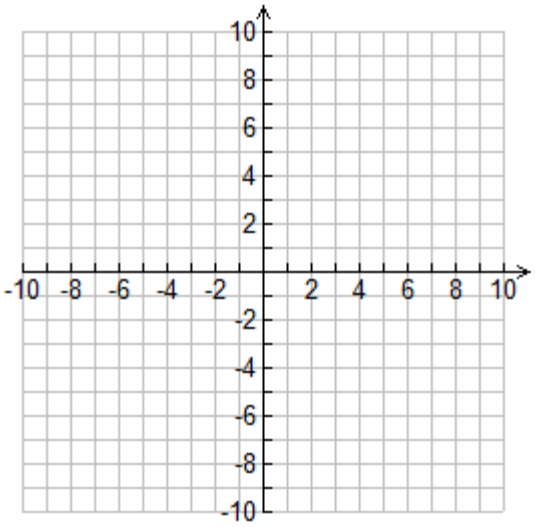
Linear or non-linear? Why?

Equation: _____

<u>Relation B</u>

Linear or non-linear? Why?

Equation: _____



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5. The following questions apply to the graph shown at the far right.

(a) y-intercept = _____

(b) slope = _____

(c) equation: _____

(d) Description of the relation in words:

_____

_____

(e) Meaning of the slope:

_____

_____

(f) Meaning of the y-intercept:

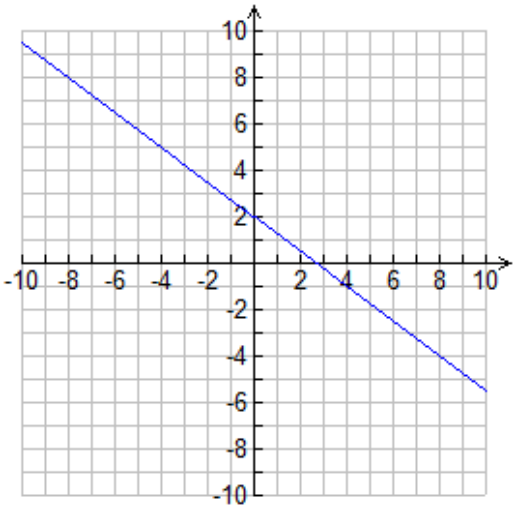
_____

_____

(g) Explanation of why the slope must be negative:

_____

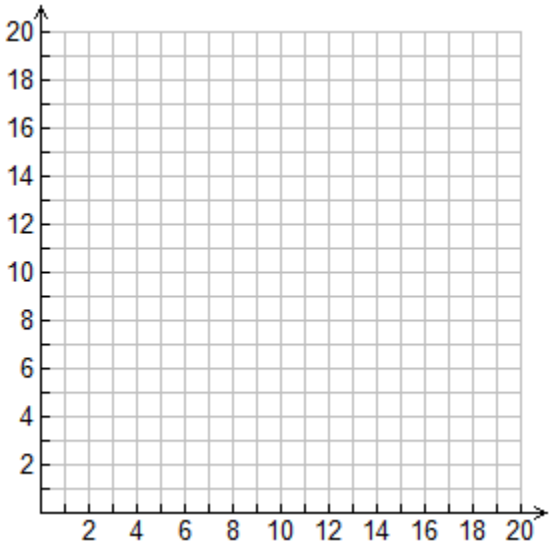
_____



6. Bank *A* offers a student banking account that charges \$0.75 per withdrawal. Bank *B* offers a student banking package for \$0.50 per withdrawal plus a monthly flat fee of \$2.00. How would you decide which bank to choose for your financial needs?

(a) Write equations for the cost for each bank account.

(b) Plot a graph of cost versus number of withdrawals for each bank.



(c) Explain the meaning of the slope and *y*-intercept of each relation.

(d) Which bank would you choose? Explain fully.