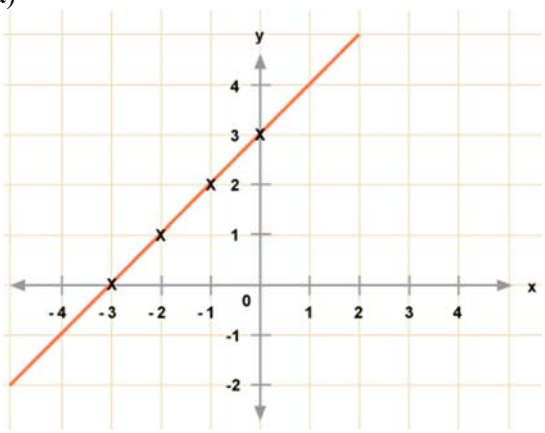
First name: _____ Last name: _____ Student ID: _____

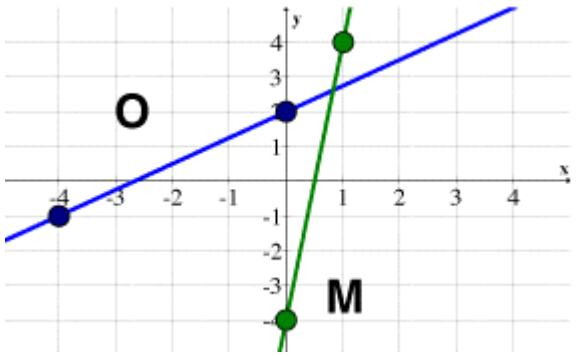
Chapter 5 Analytic Geometry (1) Homework

1. Given the graphs, use rise over run find the slopes of each line.

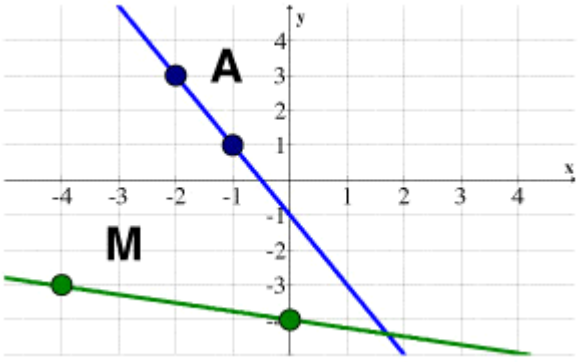
a)



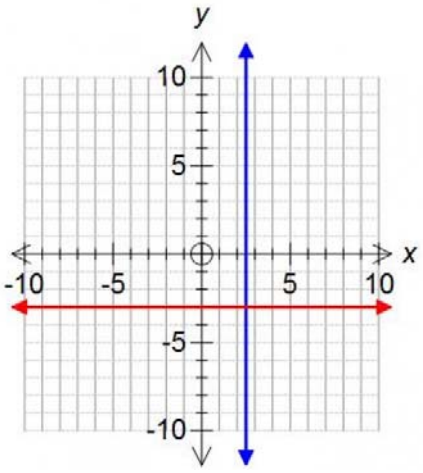
b)



c)



d)



2. Determine the length of the line segment joining the two given points.

(a) (5, 2) and (5, 7)

(b) (3, 8) and (5, 8)

(c) (2,8) and(2,15)

(d) (−4, 16) and (−4, 0)

3. Determine the slopes of the line segments joining the following pairs of points and describe the line as rising, falling, horizontal, or vertical.

(a) A (5, −3), B (4, 6)

(b) C (− 1, 7), D (−4, 8)

(c) E (−3, 5), F (5, 9)

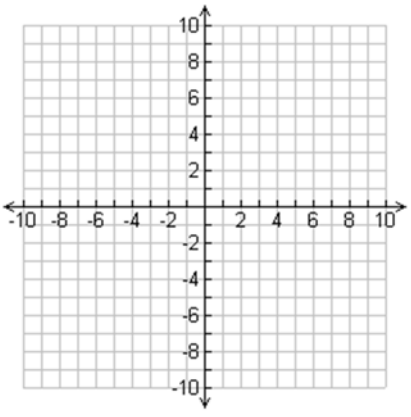
(d) G (0, 11), H (1, −5)

(e) I (-12, 4), J (-12, -7)

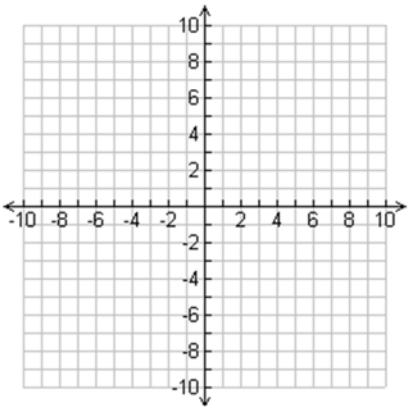
(f) K (10, 3), L (-8, 3)

4. Sketch the graphs by finding the x-intercept and y-intercept.

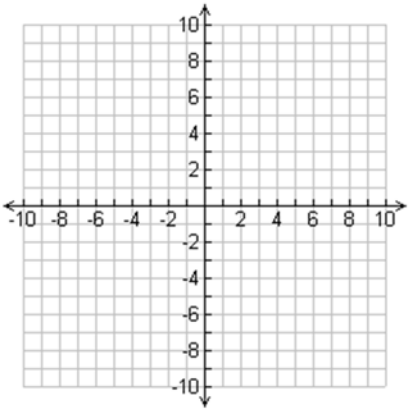
a) $y = 2x + 6$



b) $5x - 2y = 10$



c) $y = -3x + 3$



5. Calculate the lengths of the following line segments.

a) A (2, 3), B (-3, 7)

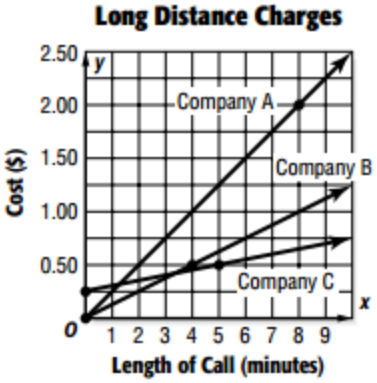
b) A (6, -9), B (-4, -5)

6. A quadrilateral has vertices A(4, 6), B(-5, 3), C(-8, 4), D(3, 7). Find the lengths and the slopes of the diagonals.

7. Find the perimeter of a triangle with vertices A(3, 4), B(-5, 7), C(8, 6).

8. Tom is looking at a map of the theme park. The map is laid out in a coordinate system. Tom is at (2, 3). The roller coaster is at (7, 8), and the water ride is at (9, 1). Is Tom closer to the roller coaster or the water ride?

9. The following graph compares the costs of long distance phone calls with three different companies.



Find the slope of the line for Company A, B, and C. Then interpret the slopes.