

## Unit 4: Linear Equations Review Package

1. Solve each equation:

a)  $3(x-2) + 4(x+1) = 19$

b)  $2(x+3) - (x-2) = 12$

c)  $\frac{x-1}{3} = \frac{2x}{7}$

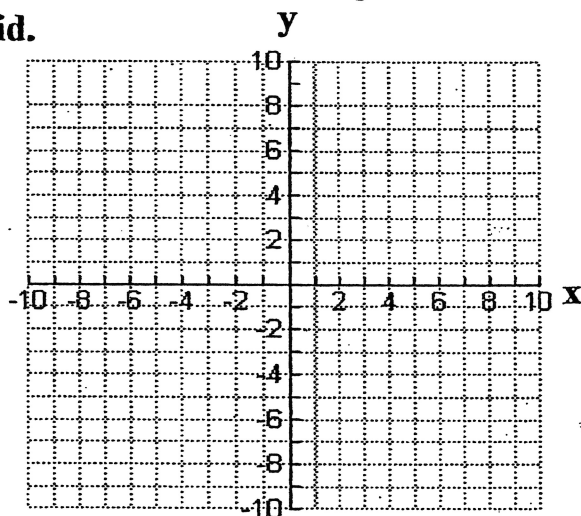
d)  $\frac{x}{5} + \frac{x}{3} = \frac{16}{15}$

2. Determine the equation of the line that passes through the point (1, -3) and has a slope of 2.

3. Determine the equation of the line that passes through the points (2, 7) and (5, 1).

4. Determine the slope and y-int of the line that has the equation  $4x + 2y = 16$ .

5. Graph the lines  $y = -2x + 4$  and  $y = \frac{1}{3}x - 2$  on the following Cartesian grid.



6. Determine the slope and y-intercept from the table of values

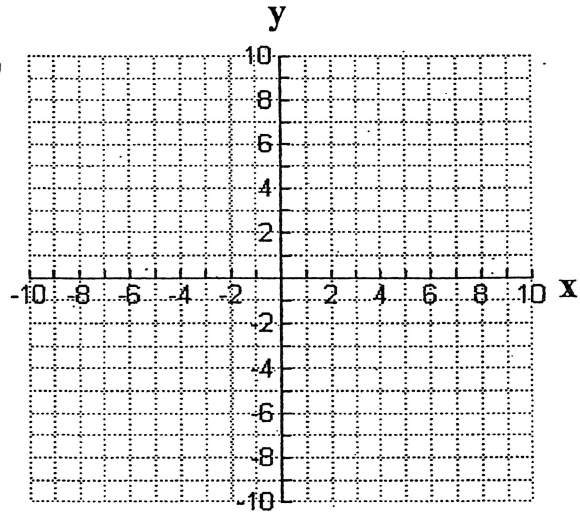
slope (m) = \_\_\_\_\_

y-int (b) = \_\_\_\_\_

x	y
-4	5
-2	8
0	11
2	14
4	17

7. Graph the line  $4x - 6y = 12$  using x and y intercepts.

x-int(            ) y-int(            )



8. The cost to produce a school yearbook is given by the equation  $C = 2n + 150$ , where  $C$  dollars is the cost to produce  $n$  yearbooks.

- a) What is the cost to produce 400 yearbooks?
- b) How many yearbooks can be produced for \$1270?

9. A conference is being held at the Cayley Math Hall. To rent this venue, it costs \$1500 plus \$55/person to cover the costs of the meal.

- a) Create an equation to model the rental cost of the Hall. Be sure to include 'let' statements for the dependent and independent variables.
- b) Use your equation to determine the cost to rent the hall for 180 mathematicians.
- c) How many mathematicians can attend the hall if there is a set budget of \$10025?

10. John purchases 2 bags of milk and 3 loafs of bread for \$15.00. If one bag of milk costs \$2.50 more than one loaf of bread, how much does one loaf of bread cost?