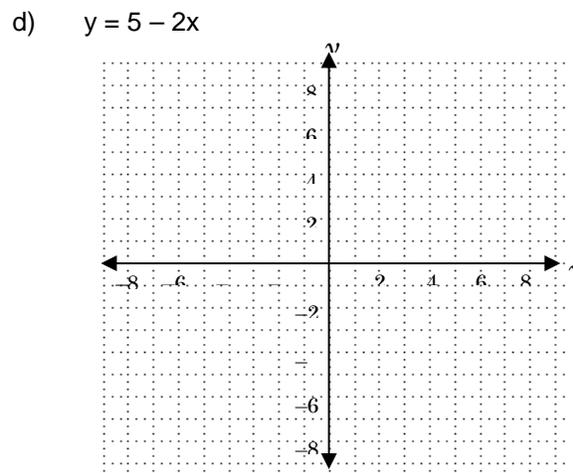
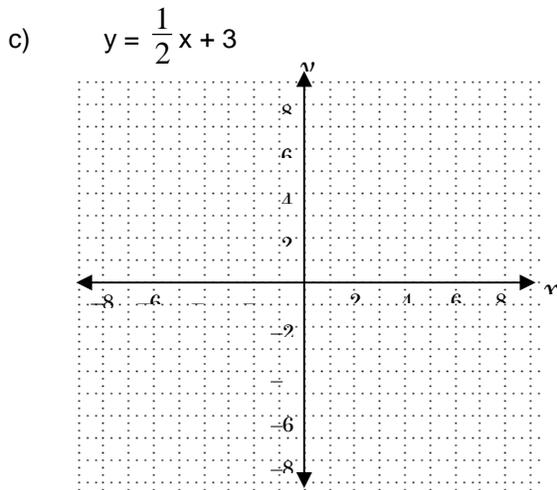
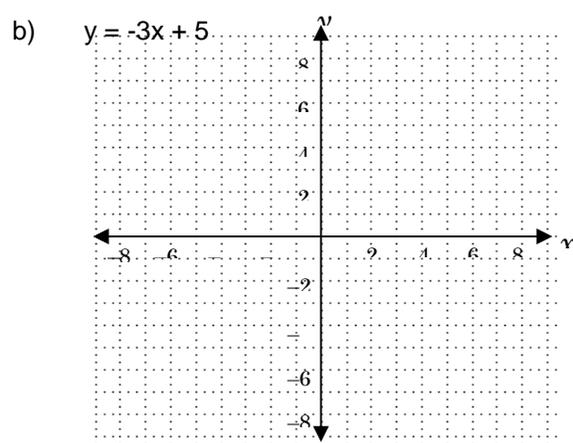
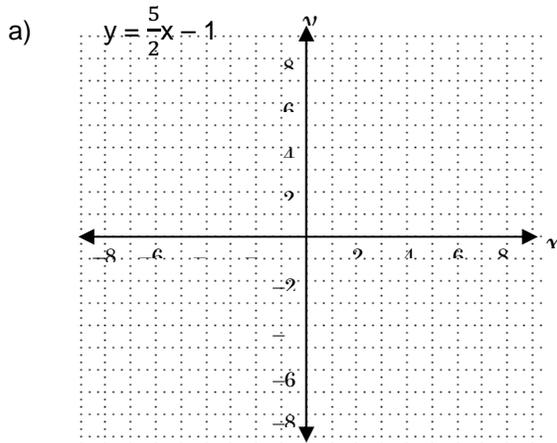


Name: \_\_\_\_\_

Rules of linear functions

Date: \_\_\_\_\_

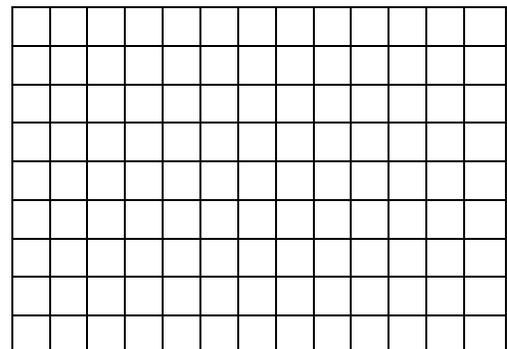
1. Draw the graphs of the following relations. Then draw the inverse  $y'$  of each.



2. Janice works at the Sky-dome and is paid \$10 for a game and 15¢ for every program that she sells.

a) Complete the table of values below and use this information to draw a graph to show how much Janice will be paid..

# Pgms	\$Pay
0	
10	
20	
30	



- b) Write an equation to model this situation. \_\_\_\_\_
- c) What is the slope of your equation? \_\_\_\_\_
- d) What is the y-intercept for this relation? \_\_\_\_\_

3. Calculate the Rate of change for the line segment joining each of the following pairs of points.

- a) A(1,4) and B(3,10)
- b) E (2,3) and F(-1,5)
- c) G(0,3) and H(5,3)

4. Find the equations for the following linear relations. Show all of your work for full marks.

a) slope of 3 and a y-intercept of 7

b) through the points (2,-1) and (0,2)

5. Corey rents a car for the day. The rental company charges the basic price of \$37.50 a day plus \$0.08 per kilometer driven. The total rental cost is represented by  $y$ , and the number of kilometers by  $x$ . Which equation expresses this situation?

A)  $y = 37.50x + 0.08$

C)  $x = 37.50y + 0.08$

B)  $y = 0.08x + 37.50$

D)  $x = 0.08y + 37.50$

6. The rule for a relation is  $C = 0.12x + 20$  where  $C$  represents the total cost in dollars and  $x$  represents the number of items sold. Which one of the following statements is TRUE?

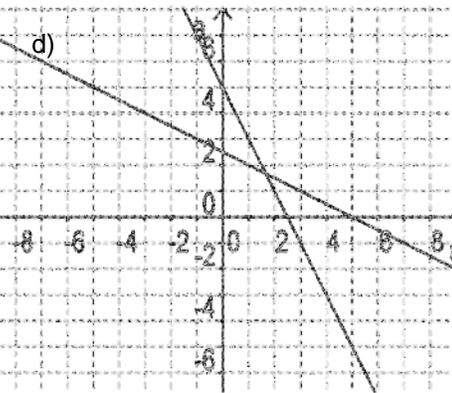
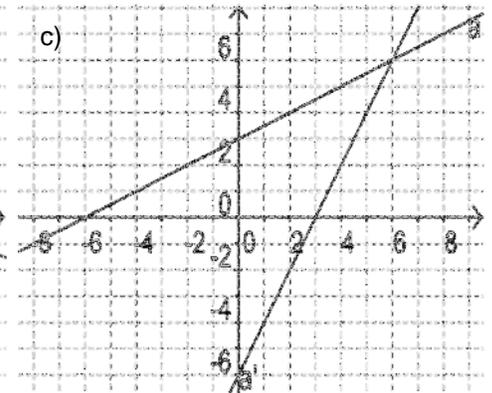
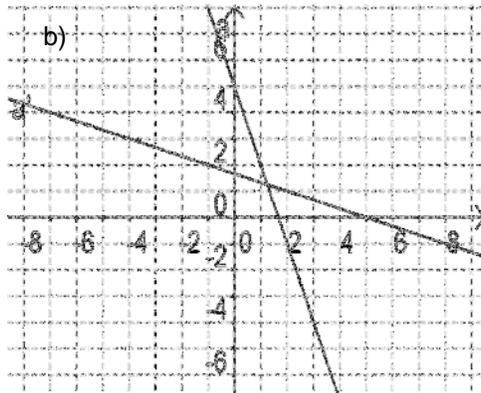
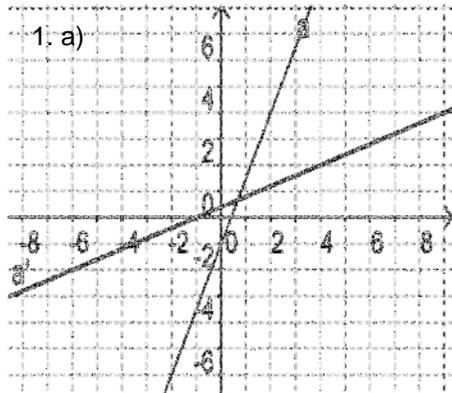
A) The total cost varies directly as the number of items purchased.

B) The cost of each item purchased is \$12.

C) The graph representing this situation is a line passing through the point (20, 0).

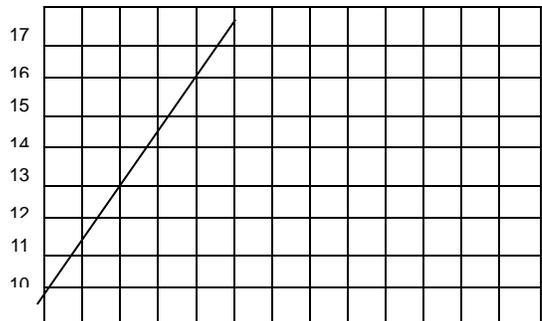
D) The graph representing this situation is a line that does not pass through the origin.

## Solutions



2. a)

# Pgms	\$Pay
0	10
10	11.50
20	13
30	14.5



b)  $y = 0.15x + 10$

c) 0.15

d) 10

3. a) 3    b)  $-\frac{2}{3}$     c) 0

4. a)  $y = 3x + 7$

b)  $y = -\frac{32}{3}x + 2$

5. B    6. D