Name:_____

Practice 6.4

Tell whether the equation $y = -2x + 3$ can represent each of the following functions.

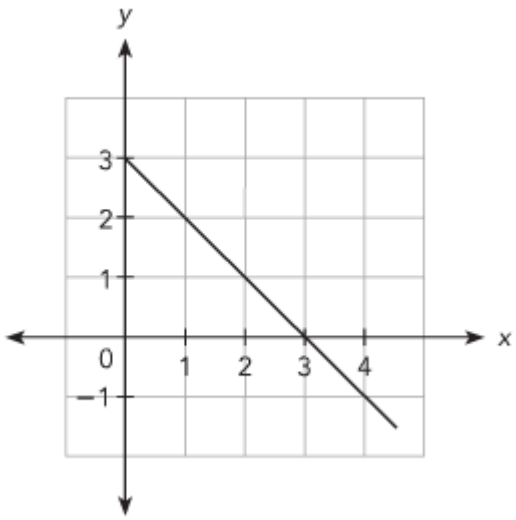
1

x	2	3	−1
y	−1	−3	5

2

x	1	2	3
y	−1	−3	−5

3



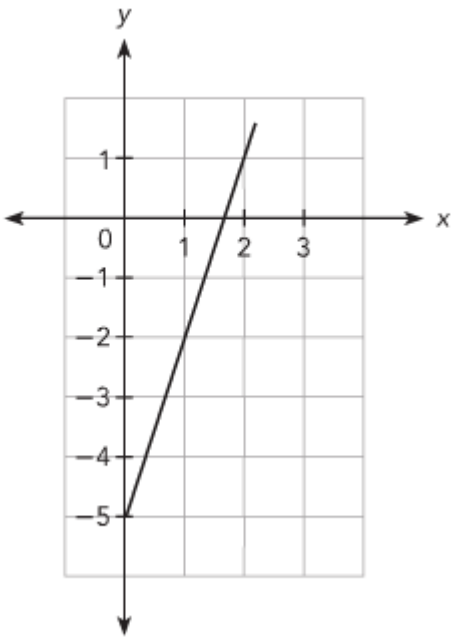
Tell whether each function can represent the table of values.

x	1	2	3
y	−2	1	4

4 $y = 3x - 4$

5 $y = 2x - 5$

6



Tell whether each function represents the verbal description.

Bryan has $30 in savings at first. He wants to save $5 per month beginning this month. y represents his total savings, in dollars, and x represents the number of months he saves.

7

Number of Months (x)	4	5	6
Total Savings (y dollars)	60	65	70

8 $y = 30 + 5x$

9 $y = 30 - 5x$

Solve. Show your work.

10 Clara and Elaine have some savings. The functions that relate each girl's total savings, y dollars, to the number of months, x, that each girl saves are as follows:

Clara: $y = 380 + 20x$
Elaine: $y = 400 + 15x$

a) Use a verbal description to compare the two functions.

b) Graph the two functions on the same coordinate plane. Use 1 unit on the horizontal axis to represent 1 month for the x interval from 0 to 8, and 1 unit on the vertical axis to represent $20 for the y interval from 380 to 540. For each function, draw a line through the points.

c) Who will save more over time? Explain.

11 The director of a theater group wants to rent a theater for an upcoming show. The director has two options for paying for the rental. Both options involve paying a deposit and then paying an additional charge for each ticket sold. For each function, the total amount the director would pay, y dollars, is a function of the number of tickets sold, x.

Option A

Number of Tickets Sold (x)	100	150	200
Total Fee (y dollars)	1,400	1,600	1,800

Option B

A deposit of $800 plus $6 per ticket sold.

a) Write an algebraic equation to represent each function.

b) Use a verbal description to compare the two functions.

c) *Math Journal* The theater seats up to 200 people. If the director expects to sell all the tickets, which of the two options, A or B, offers a better deal? Explain.