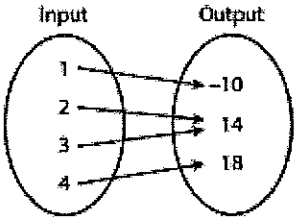
Name: Key November 27, 2017 Period: _____

Lesson 6 and 7 Review

1 Determine if each relationship represents a function.

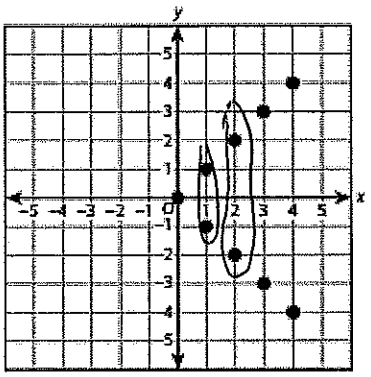
Choose *Yes* or *No* for each relationship.

a.



☑ Yes ☐ No

b.



☐ Yes ☑ No

c.

x (input)	7	5	6	7	8
y (output)	5	2	4	8	6

☐ Yes ☑ No

d. $y = \frac{1}{4}x$

x	y
4	1
8	2

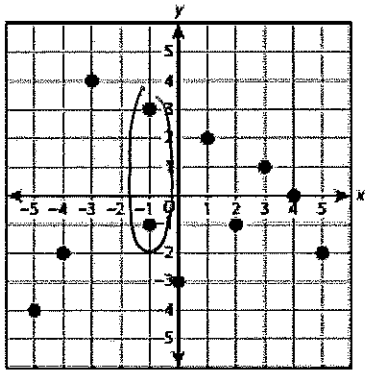
☑ Yes ☐ No

e. $x = y - 1$

x	y
0	1
10	11

☑ Yes ☐ No

2 Audrey needs to remove one point from the graph shown so it represents a function.



Which point can Audrey remove?

Choose all that apply.

A (5, −2)

B (−1, 3)

C (2, −1)

D (−1, −1)

3 Write a number from the box to complete the table of values to represent a function.

−3	−2	−1	0	1	2	3

order does not matter

Input	1	−2	−3	0	−1	3	2
Output	−2	−3	−1	3	0	2	1

4 Does the equation $y = x$ represent a function? Explain why or why not.

yes, exactly one output for each input

5.

Two functions are shown below.

Function A

x	0	3	5
y	3	9	13

Function B

$y = 3x + 2$

Which statement correctly describes the rates of change of the two functions?

A The rate of change is 2 for both Function A and Function B.

B The rate of change is 3 for both Function A and Function B.

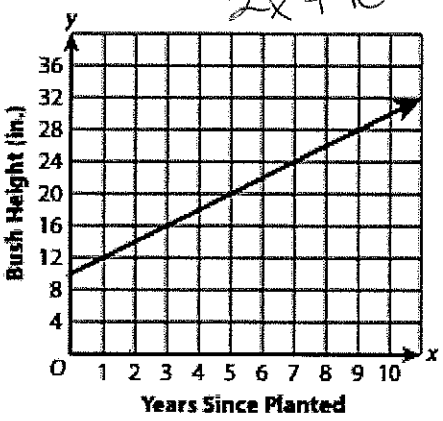
C The rate of change is greater for Function A than for Function B.

D The rate of change is greater for Function B than for Function A.

6.

Cecelia planted two bushes at the same time and measured their heights over several years. She represented each bush's growth as shown.

Bush A: $2x+10$



Bush B:

Had a height of 7.5 in. when planted;

Grew at a constant rate of 2.5 in. per year

$2.5x+7.5$

$17.5+7.5$

25

Which of the following statements are true?

Choose all that apply.

- A Bush A has a greater rate of change than Bush B.
- B Bush B has an initial value less than the initial value of Bush A.
- C After 7 years, Bush B was 1 inch taller than Bush A.
- D Bush B grows at a slower rate than Bush A.
- E Bush A and Bush B were the same height when planted.

7.

The saving rates for two students are shown.

Anna's Savings Account	Alec's Savings Account
$y = 7x + 4$ where x is the number of weeks Anna saves and y is the total amount in her account.	Alec opens his savings account with an initial amount of \$6 and adds \$4 per week.

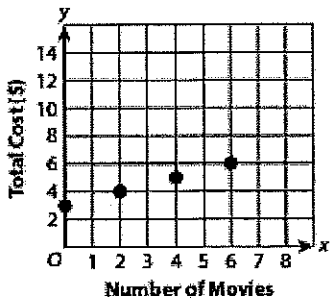
Fill in the blanks to correctly compare the two students' accounts.

Anna opens her savings account with \$ 2 less than Alec used to open his account. Anna adds \$ 3 more per week to her account than Alec adds to his.

8.

Two movie clubs charge an initial membership fee plus a constant rate for each movie that is rented. The table and graph show what the two movie clubs charge.

Club A:



Club B:

Number of Movies	Total Cost ($)
0	2.25
1	3.00
2	3.75
3	4.50

Part A

Complete an equation to represent each relationship. Let *y* represent the total cost for renting *x* movies.

Answers: **Club A:** $y =$ $\frac{1}{2}x + 3$ **Club B:** $y =$ $.75x + 2.25$

Part B

Which club has the greater initial value? Which club has the greater rate of change? Describe what this means in the context of the problem.