Unit 2, Lesson 10: Introducing Graphs of Proportional Relationships
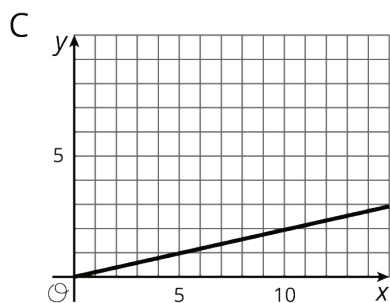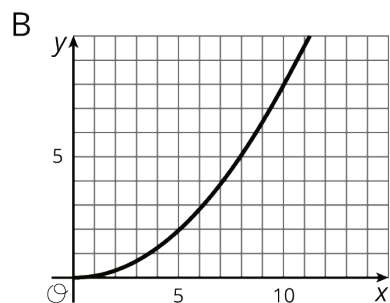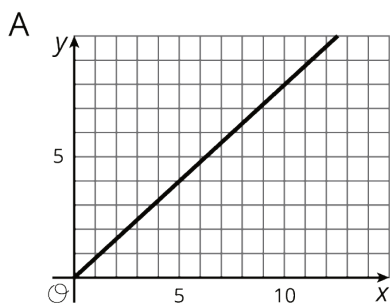
1.

   Which graphs could represent a proportional relationship? Explain how you decided.
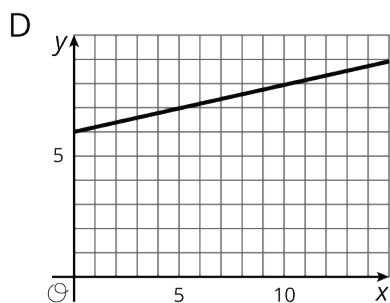
2. A lemonade recipe calls for $\frac{1}{4}$ cup of lemon juice for every cup of water.

NAME   DATE   PERIOD

a. Use the table to answer these questions.

i. What does x represent?

ii. What does y represent?

iii. Is there a proportional relationship between x and y?

b. Plot the pairs in the table in a coordinate plane.

x	y
1	$\frac{1}{4}$
2	$\frac{1}{2}$
3	$\frac{3}{4}$
4	1
5	$1\frac{1}{4}$
6	$1\frac{1}{2}$

3. Decide whether each table could represent a proportional relationship. If the relationship could be proportional, what would be the constant of proportionality?

a. The sizes you can print a photo

width of photo (inches)	height of photo (inches)
2	3
4	6
5	7
8	10

b. The distance from which a lighthouse is visible.

height of a lighthouse (feet)	distance it can be seen (miles)
20	6
45	9
70	11
95	13
150	16

(from Unit 2, Lesson 7)

4. Select **all** of the pieces of information that would tell you x and y have a proportional relationship. Let y represent the distance between a rock and a turtle's current position in meters and x represent the number of minutes the turtle has been moving.

   A. $y = 3x$
   B. After 4 minutes, the turtle has walked 12 feet away from the rock.
   C. The turtle walks for a bit, then stops for a minute before walking again.
   D. The turtle walks away from the rock at a constant rate.

(from Unit 2, Lesson 9)