## Lesson 10 Practice Problems

1. Which graphs could represent a proportional relationship?
A

B

C

D

A. A
B. B
C. C
D. D
2. A lemonade recipe calls for $\frac{1}{4}$ cup of lemon juice for every cup of water.
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 |

3. Select all the pieces of information that would tell you $x$ and $y$ have a proportional relationship. Let $y$ represent the distance in meters between a rock and a turtle's current position and $x$ represent the time in minutes the turtle has been moving.
A. $y=3 x$
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.)
4. 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 |

(From Unit 2, Lesson 7.)

