



**Tutoring Assessment**

**Subject: Math**

**Grades: Upper Elementary**

(1) Solve the following problems:

$$\begin{array}{r} 538 \\ + 217 \\ \hline \end{array}$$

$$\begin{array}{r} 4,752 \\ - 2,223 \\ \hline \end{array}$$

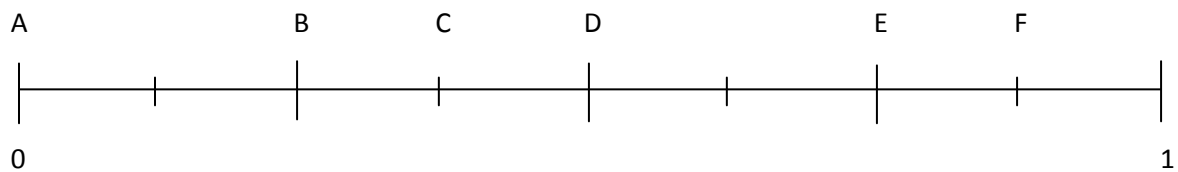
$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ \times 3 \\ \hline \end{array}$$

$$49 \div 7 =$$

$$108 \div 12 =$$

(2) Jennifer is making a number line for fractions between 0 and 1. At which point should she put  $\frac{1}{2}$ ? At which point should she put  $\frac{7}{8}$ ?



(3) Which shaded region(s) show fractions equivalent to  $\frac{2}{3}$ ?

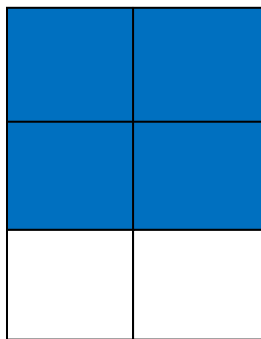


Figure 1

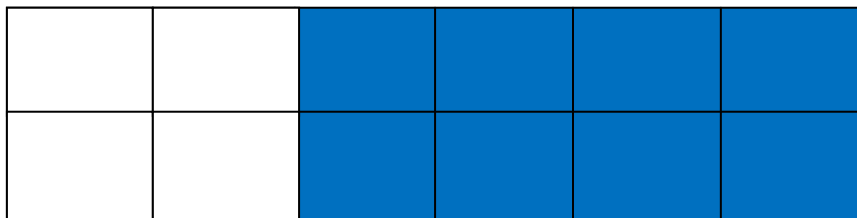
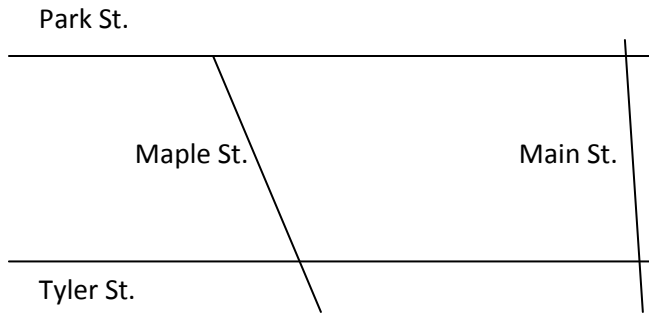


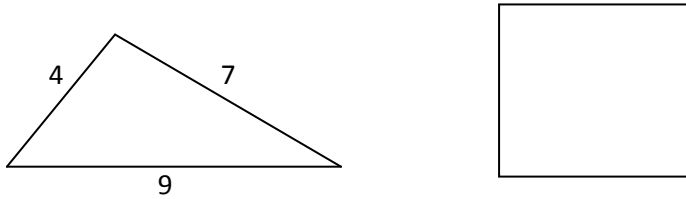
Figure 2

- a. Figure 1 only
- b. Figure 2 only
- c. Both figure 1 and figure 2
- d. Neither figure 1 nor figure 2

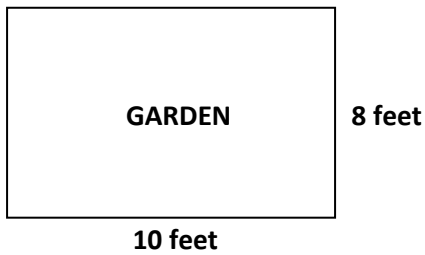
(4) According to the map in the figure below, which streets appear to be parallel to each other?



(5) If the square and the triangle below have the same perimeter, what is the length of each side of the square?



(6) Mrs. Azalea has a garden that measures 8 feet by 10 feet. She wants to extend her garden to be 9 feet by 11 feet. Describe the perimeter of each garden. Describe the area of each garden.



(7) Esteban left for school with 4 boxes of pencils. Each box had six pencils. At school, he gave away four pencils from one box. What number sentence below can be used to find the total number of pencils that were left?

a.  $4 \times 6 - 4 = \square$

b.  $4 \times 6 + 2 = \square$

c.  $3 \times 6 + 4 = \square$

d.  $3 \times 6 - 2 = \square$

(8) The following values are assigned to variables A, B & C:

**A = 2   B = 6   C = 3**

Find the value of  $(B + A) - C$

a. 1

b. 5

c. 7

d. 11

(9) Which of these problems could be solved by using the number sentence:

**A - 5 = ?**

- a. Esteban is five years older than Rosemary. If A is Rosemary's age, how old is Esteban?
- b. Rosemary is five years younger than Esteban. If A is Esteban's age, how old is Rosemary?
- c. Matt is five times as old as Rosemary. If A is Rosemary's age, how old is Matt?
- d. Rosemary is one-fifth as old as Matt. If A is Matt's age, how old is Rosemary?

## Assessment guide and Answers

This assessment is designed to help you to understand your student's comfort level with the math skills and concepts they're expected to master in grades 3 - 5. The attached exercises are intended as a relatively simple guide to help you determine a good place to start with your tutoring activities. After additional sessions with your student, you may find that the activities at your initially chosen grade level seem too easy or difficult. If so, don't hesitate to move up or down a grade level.

Comparing your student's answers to the guide below will help you decide whether it makes sense to start with 3<sup>rd</sup>, 4<sup>th</sup>, or 5<sup>th</sup> grade activities or move on to the 6<sup>th</sup> and 7<sup>th</sup> grade materials.

### Where to start:

- **3<sup>rd</sup> Grade:** Your student is able to solve some of the arithmetic problems in exercise #1, but struggles with multiplication and division of larger numbers. Your student also struggles with the fractions in exercises #2 and #3. Your student may be able to identify the parallel lines in question #4, but struggles with the area and perimeter questions in # 5 and #6. Your student may be able to answer question #7 correctly, but struggles to work with the variables in questions #8 and 9.
- **4<sup>th</sup> Grade:** Your student successfully completes most of the arithmetic problems in exercise #1, but may struggle with dividing by double-digit numbers. Your student shows an understanding of fractions and correctly answers #2 and/or #3. Your student shows some familiarity with the geometric concepts on page two and answers at least a couple of these questions correctly. Your student may be able to answer question #7, but struggles to work with the variables in questions #8 and 9.
- **5<sup>th</sup> Grade:** Your student successfully completes almost all the arithmetic and fraction problems on the first page. Your student shows understanding of the geometric concepts on page two and answers most or all of the questions correctly. On page 3, your student shows some understanding of working with variables and answers some or all of the questions correctly.
- **6<sup>th</sup> and 7<sup>th</sup> grade:** Your student successfully and easily completes the entire assessment and answers all or almost all of the questions correctly.

### Answers:

- (1) 755; 2,529; 54; 111; 7; 9
- (2) D; F
- (3) C (both  $\frac{4}{6}$  and  $\frac{8}{12}$  can be reduced to  $\frac{2}{3}$ )
- (4) Park & Tyler
- (5) 5 (the perimeter of the triangle equals 20; since all 4 sides of a square must be the same length, each side must equal 5)
- (6) The perimeter of the initial garden is 36 ( $8 + 8 + 10 + 10$ ); the perimeter of the extended garden would be 40 ( $9 + 9 + 11 + 11$ ).  
The area of the initial garden is 80 ( $8 \times 10$ ); the area of the extended garden would be 99 ( $9 \times 11$ )

(7) A (to find the number of pencils originally in the boxes, multiply the number of boxes (4) times the number of pencils in each box (6); finally, subtract the number of pencils Esteban gave away (4)

(8) B;  $(6 + 2) - 3 = 5$

(9) B is the only scenario for which the number sentence is true. If Rosemary is five years younger than Esteban, and A represents Esteban's age, then  $A - 5$  would represent Rosemary's age. For example, if Esteban were 25, then plugging 25 into the equation  $(25 - 5)$  would give Rosemary's age of 20.

For answer A, the correct number sentence would be  $A + 5 = ?$ . For answer C, the correct number sentence would be  $A \times 5 = ?$ . For answer D, the correct number sentence would be  $A \div 5 = ?$ .