

Lesson 1 Multi-Step Problem Solving

Multi-Step Example

Thirty-six 7th graders were asked to choose their favorite color. The table shows the fraction of students that chose each color. What decimal shows the difference between the most and least popular colors? 7.NS.2d, MP 8

- (A) $0.\overline{16}$ (C) $0.\overline{3}$
 (B) $0.\overline{1}$ (D) $0.\overline{5}$

Color	Fraction
Red	$\frac{5}{18}$
Yellow	$\frac{1}{6}$
Blue	$\frac{4}{9}$
Green	$\frac{1}{9}$

Use a problem-solving model to solve this problem.

1 Understand

Read the problem. Circle the information you know.
Underline what the problem is asking you to find.

2 Plan

What will you need to do to solve the problem? Write your plan in steps.

Step 1 Express each fraction as a _____.

Step 2 Determine which decimal is the _____ and which is the _____. Then subtract.

Read to Succeed!



Read the question carefully. Since it asks for the difference, you will need to subtract.

3 Solve

Use your plan to solve the problem. Show your steps.

Express each fraction as a decimal. Subtract the least from the greatest.

$$\frac{5}{18} = \underline{\quad\quad} \quad \frac{1}{6} = \underline{\quad\quad} \quad \frac{4}{9} = \underline{\quad\quad} \quad \frac{1}{9} = \underline{\quad\quad}$$

_____ - _____ or _____ Subtract.

There were _____ more of the students chose _____ as their favorite color over _____. So, the correct answer is _____. Fill in that answer choice.

4 Check

How do you know your solution is accurate?

Lesson 1 *(continued)*

Use a problem-solving model to solve each problem.

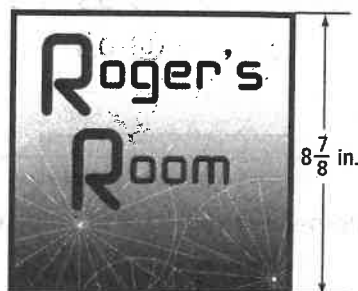
- 1 The table shows the lengths of straws, in centimeters, that Jessica has available for an art project.

Straw	Length (cm)
Striped	12.5
White	10.75
Clear	13.35
Blue	11.3

She cut the white straw into two equal-size pieces. What mixed number represents the length of each piece of white straw after cutting? 7.NS.3, MP 6

- (A) $6\frac{1}{4}$
 (B) $5\frac{13}{20}$
 (C) $5\frac{3}{8}$
 (D) $5\frac{1}{8}$
- 3 Destiny read $\frac{1}{4}$ of a book on the day she received it. The next day, she read $\frac{5}{8}$ of the book. On the third day, she finished reading the book. What decimal represents the fraction of the book Destiny read on the third day? 7.NS.3, MP 2

- 2 Roger made a square sign to place on his bedroom door shown below in the sketch. What is the decimal equivalent of the perimeter, in inches, of his sign? 7.NS.3, MP 1



- 4 **H.O.T. Problem** Graph and label the fractions $-\frac{2}{3}$, $-\frac{3}{5}$, and $-\frac{5}{8}$ on the number line shown using their equivalent decimal value. Explain how you determined where to place each fraction. 7.NS.2d, MP 2

