



Part of a Whole

Summary

Fractions show up everywhere! People use them every day in activities like cooking, carpentry, sewing, and driving. Cooking involves using measurements of ingredients given in fractions, such as $\frac{1}{2}$ cup flour or $\frac{1}{4}$ teaspoon of salt. In construction, precise measurements are important when building houses or cutting lumber for a project. A driver needs to know what distances, such as a half-mile or quarter-mile, represent. Chemists use fractions to measure the right amount of a chemical to use with other ingredients to create a compound. If you think about it, you probably come in contact with fractions even more than you do whole numbers!

This activity is designed to explore some common applications of fractions.

Workplace Readiness Skill

Mathematics: Uses mathematical reasoning to accomplish tasks.

Workplace Readiness Definition

- using mathematical reasoning and processes to accomplish job-specific tasks (e.g., using graphs and charts to estimate expenditures for a construction job, using decimals and percentages in retail applications)
- making calculations related to personal finance (e.g., wage rates, paycheck deductions, taxes)

Vocabulary

Fraction

Numerator

Denominator

Mixed Number

Improper Fraction

Context Questions

- Have you ever had to do any calculations with fractions?
- Can you think of some instances when you used fractions?
- Can you name some occupations that make use of fractions?

Guidelines

1. Look up the vocabulary terms. Make sure that you understand each one.
2. Prerequisite Knowledge/Skills
You should be able to:
 - Add, subtract, multiply, and divide using fractions
 - Solve simple equations
3. Complete the *Part of a Whole* exercise.



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Evaluation

Check your work by referring to the *Part of a Whole Key*.

Reflection after Completion

- Did you solve all or most of the problems correctly?
- Which ones were the most difficult for you?
- Were you able to apply the technique for solving word problems?
- What are the benefits of knowing how to work with fractions?

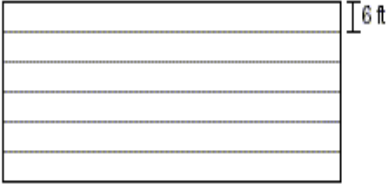
Resources:

If you need a review of fractions or more practice, go to:

<http://www.mathsisfun.com/fractions-menu.html>

Part of a Whole

A. These are multiple choice items. Solve the problem and circle the correct answer.

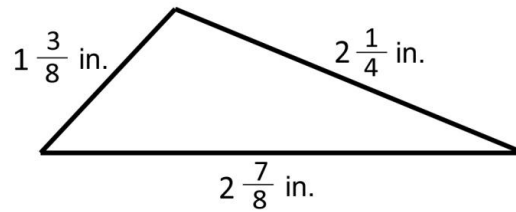
Item #	Item
1.	<p>The Longview Shores swimming pool is $2\frac{1}{2}$ times as long as it is wide. There are 6 swimming lanes running the length of the pool. Each lane is 6 feet wide. What is the length of the pool?</p> <div style="text-align: center;"></div> <p>A. 30 ft. B. 36 ft. C. 51 ft. D. 90 ft.</p>
2.	<p>Miriam has a custard recipe that requires 1 cup of sugar, 6 eggs, 3 cups of milk, and 1 teaspoon of vanilla. But she has only 4 eggs. She decides to adjust the recipe to the 4 eggs. How much milk will she need?</p> <p>A. 2 cups B. 3 cups C. 1 cups D. 4 cups</p>
3.	<p>In a school with 350 students, $\frac{3}{7}$ of the students are boys. How many boys attend the school?</p> <p>A. 110 B. 125 C. 140 D. 150</p>

<p>4.</p>	<p>Beth walked $\frac{3}{4}$ of a mile yesterday and $1\frac{1}{2}$ miles today. How far did she walk in total?</p> <p>A. $1\frac{3}{4}$</p> <p>B. $2\frac{1}{4}$</p> <p>C. $2\frac{1}{2}$</p> <p>D. $3\frac{1}{4}$</p>
<p>5.</p>	<p>Carlos is putting ceiling tiles in his den. The room is $23\frac{1}{2}$ feet long and 15 feet wide. Each ceiling tile covers $2\frac{1}{2}$ square feet. What is the minimum number of ceiling tiles that he will need to cover the ceiling of his den?</p> <p>A. 200</p> <p>B. 146</p> <p>C. 141</p> <p>D. 152</p>
<p>6.</p>	<p>Kathleen is buying 3 bags of cement to repair her driveway. Each bag weighs $25\frac{1}{2}$ pounds. How many pounds of cement is she buying?</p> <p>A. $78\frac{1}{2}$</p> <p>B. $76\frac{1}{2}$</p> <p>C. 75</p> <p>D. $70\frac{1}{2}$</p>
<p>7.</p>	<p>Thirty-five girls went out for the soccer team. Of these, $\frac{5}{7}$ made the team. Of the girls who made the team, $\frac{4}{5}$ showed up for practice on Wednesday. How many girls were at the Wednesday practice?</p> <p>A. 20</p> <p>B. 22</p> <p>C. 25</p> <p>D. 35</p>

8. What is the perimeter of this triangle?

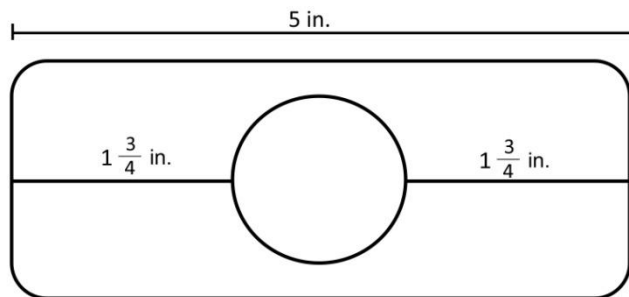
(Remember: Perimeter is the distance around a geometric figure.)

- A. $4\frac{21}{64}$
- B. $5\frac{11}{20}$
- C. $6\frac{1}{4}$
- D. $6\frac{1}{2}$



9. What is the diameter of the hole in this gasket?

- A. 5 in.
- B. $4\frac{1}{2}$ in.
- C. $1\frac{1}{2}$ in.
- D. 1 in.



10. Jerry is a developer and just bought 36 acres that he intends to partition into home lots. Each lot must be at least $\frac{3}{4}$ of an acre. How many homes can he build on this parcel?

- A. 12
- B. 9
- C. 48
- D. 27

Vocabulary for *Part of a Whole*

Term	Definition
Fraction	Part of a whole
Numerator	The top number in a fraction
Denominator	The bottom number in a fraction
Mixed Number	A number made up of a whole number and a fraction
Improper Fraction	A fraction whose numerator is larger than the denominator