

Accelerated 6 • Unit 3 Worksheet

Fractions and Decimals

Name: _____

Date: _____

Part A • Quick Computations

Mental math when possible.

$\frac{3}{4} \div \frac{1}{2}$ _____	$1.4 \cdot 0.5$ _____	$6 \div \frac{1}{4}$ _____	$2.4 \div 0.6$ _____
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Part B • Sense-Making with Division

1. For each expression, decide whether the answer is GREATER than 1, EQUAL to 1, or LESS than 1 — WITHOUT computing. Then briefly explain your reasoning.

a. $3 \div \frac{1}{2}$: ☐ >1 ☐ =1 ☐ <1 because:

b. $\frac{1}{2} \div 3$: ☐ >1 ☐ =1 ☐ <1 because:

c. $\frac{3}{4} \div \frac{3}{4}$: ☐ >1 ☐ =1 ☐ <1 because:

d. $0.4 \div 0.8$: ☐ >1 ☐ =1 ☐ <1 because:

2. Lin says: " $4 \div \frac{1}{3}$ means: how many $\frac{1}{3}$'s fit into 4?" Sara says: " $4 \div \frac{1}{3}$ means: if 4 is $\frac{1}{3}$ of something, what is the whole?" Which interpretation is correct?

☐ Lin ☐ Sara ☐ Both

Explain why:

Find the value of $4 \div \frac{1}{3}$ and verify using BOTH interpretations.

Part C • Operations with Decimals

3. Find $2.4 \div 0.6$ in THREE different ways.

Way 1. (rewrite as a fraction)

Way 2. (scale both numbers to be whole numbers)

Way 3. (estimate-and-check, or use a number line)

4. Han computes 0.7×0.8 and gets 5.6. Without computing, explain why Han is wrong. Then find the correct answer.

Why Han is wrong:

Correct answer: _____

What rule about decimal multiplication did Han forget?

5. Compute $1.25 + 0.375 + 0.0625$ in two ways: as decimals AND by converting to fractions. Which way do you find easier? Why?

Decimals:

Fractions:

Which way and why:

Part D • Fractions in Geometry

6. A rectangle is $\frac{2}{3}$ meter by $1\frac{3}{4}$ meters. Find its area as a fraction AND as a decimal.

Fraction:

Decimal (to nearest hundredth):

Are your two answers consistent? How can you check?

7. A box is $\frac{1}{2}$ m $\times$ $\frac{1}{3}$ m $\times$ $\frac{1}{4}$ m. Find its volume. Then find how many such boxes fit into a cubic meter.

Volume of one box (m^3):

Number of boxes in 1 m^3 :

Sketch your reasoning:

Part E • Thinking Deeply

8. Maya wrote: "When you divide, the answer is always smaller." Is Maya right? Find ONE example that supports her and TWO examples that show she's wrong.

9. A pitcher holds $1\frac{3}{4}$ liters. A glass holds $\frac{2}{5}$ liter. About how many full glasses can you pour from the pitcher? Show your work, then explain the meaning of the REMAINDER.

10. Write a story problem for each of these expressions. The stories should make the operation feel natural.

a. $8 \div \frac{1}{4} =$ story:

b. $\frac{1}{4} \div 8 =$ story:

c. $\frac{3}{4} \div \frac{1}{4} =$ story:
