Grade 5 · Unit 2 Worksheet

Fractions as Quotients and Fraction Multiplication

Name: _____ Date: _____

Part A · Fractions as Division

A fraction like 3/4 can mean 3 divided by 4. This part probes that idea.

1. 5 children share 3 sandwiches equally. How much sandwich does each child get?

Draw a diagram to show your thinking:

Write your answer as a fraction: _____ sandwich per child

Write a division equation that matches this situation: _____ / _____ = _____

2. Without computing, decide: which is bigger, 7 / 8 or 9 / 8?

Answer: _____

Explain (no division allowed!):

3. Diego says '4 / 3 = 4/3 = 1 and 1/3 because there is not enough to give everyone a whole sandwich.' Sara says '4 / 3 = 3/4 because you turn it around when there are more people than things.' Who is correct? Explain.

Part B · Multiplying a Whole Number by a Fraction

4. Find the value of 6 x 2/3.

Show your work using a diagram OR repeated addition:

Answer: _____

Find 6 x 2/3 a SECOND way, using division. Hint: 2/3 means 2 divided by 3.

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5. Lin walks 3/4 mile each day. How far does she walk in 5 days?

Equation: _____ x _____ = _____

Show your work:

Answer: _____ miles (as a mixed number)

6. Without computing exactly, decide: is 8 x 3/5 GREATER than 8 or LESS than 8?

Greater or less than 8? _____

Explain WITHOUT multiplying:

Part C · Area Model and Mixed Numbers

7. A rectangle has side lengths 4 and 2 and 1/2.

Find its area using the DISTRIBUTIVE PROPERTY: 4 x (2 + 1/2) = (4 x 2) + (4 x 1/2)

Show your work:

Area = _____ square units

Why does decomposing 2 and 1/2 into 2 + 1/2 work?

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8. Pat says: '5 x 7/3 does not make sense because the answer should be smaller than 5, but 7/3 is bigger than 1.'

Is Pat correct that multiplying always makes things smaller? Yes / No

Find 5 x 7/3: _____

Explain when multiplication by a fraction makes things BIGGER vs SMALLER:

Part D • Thinking Deeply

9. Show that 8/5 = 8 / 5 by drawing a diagram of 5 children sharing 8 candy bars equally.

Draw:

How much does each child get? _____

Explain why 8/5 and 8 / 5 are the same number:

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10. Write a story problem that matches the expression 7 x 2/3.

My problem:

The answer: _____

11. Han calculated 6 x 3/8 = 18/48. Is he right? If not, what is the error?

Correct answer: _____

Han's mistake:
