

WarmUp

Find the product.

7. $8 \cdot 12 =$ _____

8. $15 \times 12 =$ _____

9. $(13)(20) =$ _____

11. $13 \times 6 =$ _____

12. $(11)(8) =$ _____

13. $19 \cdot 21 =$ _____

15. $0 \cdot 114 =$ _____

16. $26 \times 1 =$ _____

17. $4 \cdot 10 \cdot 8 =$ _____

Essential Question

What does it mean to multiply fractions?

Lesson 2.1

October 7, 2013

Lesson Target

To be able to:

- use a visual model and a formal process for multiplying fractions.

Score	Description
4	I can teach other students how to use a visual model and a formal process for multiplying fractions.
3	I can use a visual model and a formal process for multiplying fractions.
2	I recognize a visual model and a formal process for multiplying fractions.
1	I do not know how to use a visual model and a formal process for multiplying fractions.

Activity1

With a partner, complete Activity 1
on page 31 in your Big Ideas Record
and Practice Journal.

Activity2

With a partner, complete Activity 2 on page 32 in your Big Ideas Record and Practice Journal.

1 Multiplying Fractions

Find $\frac{1}{5} \times \frac{1}{3}$.

$$\frac{1}{5} \times \frac{1}{3} = \frac{1 \times 1}{5 \times 3}$$

Multiply the numerators.

Multiply the denominators.

$$= \frac{1}{15}$$

Simplify.

2 Multiplying Fractions with Common Factors

Find $\frac{8}{9} \times \frac{3}{4}$.

Estimate $1 \times \frac{3}{4} = \frac{3}{4}$

$$\frac{8}{9} \times \frac{3}{4} = \frac{8 \times 3}{9 \times 4}$$

Multiply the numerators.

Multiply the denominators.

$$= \frac{\cancel{8} \times \cancel{3}}{\cancel{9} \times \cancel{4}}$$

Divide out common factors.

$$= \frac{2}{3}$$

Simplify.

••• The product is $\frac{2}{3}$.

Reasonable? $\frac{2}{3} \approx \frac{3}{4}$ ✓

The image shows handwritten mathematical work in red and blue ink. On the left, there are two division problems that have been crossed out with blue lines. The first problem is $4 \overline{) 7}$ with a '1' written above the 4 and a '1' below the 7. The second problem is $21 \overline{) 32}$ with a '3' written above the 21 and an '8' below the 32. To the right of these crossed-out problems, there is a final result written in blue ink: $14 \overline{) 8}$.

$$\frac{4}{7} \cdot \frac{5}{16} = \frac{5}{14}$$

Handwritten work showing the multiplication of two fractions. The first fraction is $\frac{4}{7}$. The second fraction is $\frac{5}{16}$, with a '5' written above the numerator and a '4' written below the denominator. The result is $\frac{5}{14}$.

Multiplying Fractions by Whole Numbers

$$\frac{2}{5} \cdot \frac{2}{1} = \frac{4}{1} = \textcircled{4}$$

Multiplying Mixed Fractions

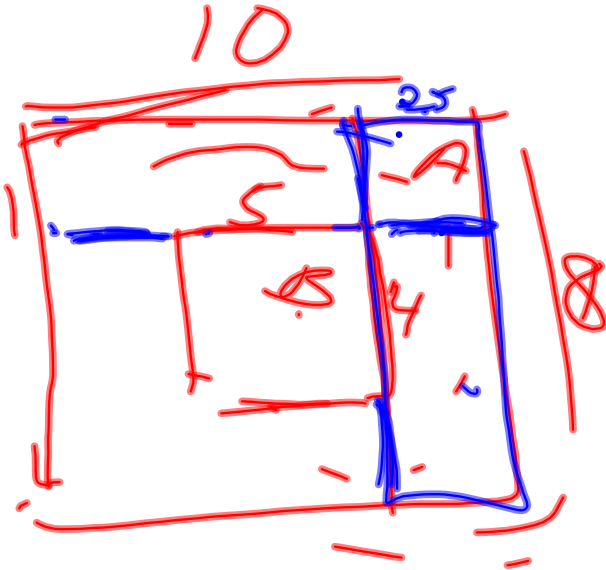
$$4\frac{1}{5} \cdot 2\frac{1}{7}$$
$$\frac{32}{5} \cdot \frac{14}{7} = \frac{9}{1} = 9$$

Assignment

In your Big Ideas text book, do numbers 10 - 14 on page 59 & numbers 30 - 33, 47 - 49, 54 on page 60 & number 56 - 57 on page 61.

$$\begin{array}{r} \rightarrow +1 \\ * 2 \end{array} \cdot \frac{3}{2}$$

~~$$\begin{array}{r} 5 \\ 5 \\ 2 \end{array} \cdot \frac{3}{2}$$~~
$$= \frac{5}{1} = \textcircled{5}$$



$$1\frac{1}{5} \cdot 5\frac{2}{5} \cdot 4\frac{7}{12}$$

$$\frac{5\cancel{4}1\cancel{4}^2}{5} \cdot \frac{\cancel{5}1\cancel{2}^3}{\cancel{5}^3} \cdot \frac{\cancel{2}1\cancel{3}^4}{\cancel{4}^4} = \frac{132}{5} = 26\frac{2}{5}$$

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Homework

Big Ideas Record and
Pracce Journal

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