Multiplying Fractions

One way to think about it.

What do you notice about the numerators and denominators in these 2 problems?

a. $\dfrac{2}{3} \cdot \dfrac{3}{4} =$

b. $\dfrac{3}{3} \cdot \dfrac{2}{4} =$

Find the answer to these 2 problems.
Does it make sense that the solutions are the same? Explain.

What do you notice about these 2 problems?
Compare the factors (numbers being multiplied) as well as the answers.

c. $\dfrac{3}{3} \cdot \dfrac{2}{4} =$

d. $\dfrac{1}{1} \cdot \dfrac{1}{2} =$

Which problem did you find to be the simplest one to solve? Circle One

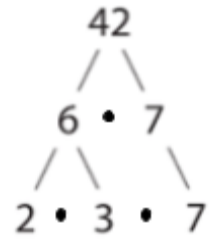a.   b./c.   d

Explain your choice.

Multiplying Fractions
Another way to think about it.

Prime Factorization: Rewriting a number as a multiplication expression using only prime numbers.

42
/ \
6 • 7
/ \   \
2 • 3 • 7

Write the prime factorization for the following numbers:

9

4

16

27

_____

Do you agree or disagree with the statement below? Explain your reasoning.

$$\frac{9}{16} \cdot \frac{4}{27} = \frac{9 \cdot 4}{16 \cdot 27} = \frac{4 \cdot 9}{16 \cdot 27}$$

Rewrite the right side of the equation as prime factors.

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What numbers do the numerator and denominator have in common?

Can that help us simplify this problem? Explain