


# Concept: Multiplying Fractions

Name: \_\_\_\_\_

## COMPUTER COMPONENT

**Instructions:** In  follow the **Content Menu** path:

**Fractions > Multiplying Fractions**

 Work through all Sub Lessons of the following Lessons **in order**:

- *Pattern Blocks*
- *Fraction Strips*
- *Word Problems*
- *A Summary*
- *The Meaning of "Of"*
- *Order in Multiplying*
- *Multiplying Fractions with Large Numbers*
- *Multiplying Many Fractions*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

## NOTES

1. Pattern blocks are manipulatives that provide an effective *concrete* visual of how to multiply fractions.

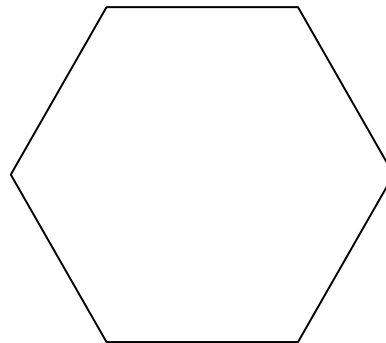
On the following hexagon,

(a) Divide the hexagon into 6 equal parts.

(b) Shade  $\frac{1}{3}$  of it.

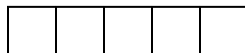
(c) Shade  $\frac{1}{2}$  of that which you shaded in (b).

(d) What is  $\frac{1}{2}$  of  $\frac{1}{3}$ ? \_\_\_\_\_



2. Use the following fraction strip to help you with this question.

$$\frac{1}{3} \text{ of } \frac{3}{5} = \frac{1}{3} \times \frac{3}{5} = \underline{\hspace{2cm}}$$



3. Without realizing it, we are required to multiply fractions quite often in our daily lives.

Boris spent  $\frac{3}{4}$  of  $\frac{1}{2}$  of his allowance. *Give the solution to this question below.*

4. Does order matter when we multiply fractions? (*Would we get the same result if we*

*changed  $\frac{3}{4} \times \frac{1}{2}$  to  $\frac{1}{2} \times \frac{3}{4}$ ?) **Explain***

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5. Multiplying fractions with large numbers can sometimes seem like a daunting task.

**Remember:** *There are always more efficient ways of doing things.*

Example 1:  $\frac{39}{32} \times \frac{16}{26} = \frac{39 \times 16}{32 \times 26} = \text{_____} = \text{---}$

There is an easier way.

$$\frac{39}{32} \times \frac{16}{26} = \text{---} \times \text{---} = \text{---} \times \text{---} =$$

Example 2:  $\frac{15}{34} \times \frac{51}{60} = \text{_____} = \text{---} =$

There is an easier way.

$$\frac{15}{34} \times \frac{51}{60} = \text{---} \times \text{---} = \text{---} =$$

6. Don't be thrown by a question that has many numbers in it. *Take your time and apply your newly acquired knowledge.*

Example 1:  $\frac{16}{21} \times \frac{15}{4} \times \frac{7}{20} =$

Example 2:  $\frac{25}{14} \times \frac{16}{45} \times \frac{49}{40} =$

### OFF COMPUTER EXERCISES

1. Using each bar below, shade in the product of the following fractions.

(a)  $\frac{1}{2} \times \frac{1}{3} =$

(b)  $\frac{1}{4} \times \frac{1}{2} =$

(c)  $\frac{1}{3} \times \frac{1}{3} =$

2. Multiply the following fractions. *Your answer should be in lowest terms.*

(a)  $\frac{1}{2} \times \frac{3}{4} =$

(b)  $\frac{4}{5} \times \frac{5}{8} =$

(c)  $\frac{8}{9} \times \frac{3}{4} =$

(d)  $\frac{1}{8} \times \frac{1}{9} =$

(e)  $\frac{2}{3} \times \frac{4}{3} =$

(f)  $\frac{1}{3} \times \frac{4}{5} \times \frac{3}{7} =$

3. Multiply the following fractions. *Remember to use the skills you learned in Multiplying Fractions with Large Numbers.*

(a)  $\frac{10}{12} \times \frac{4}{5} =$

(b)  $\frac{11}{14} \times \frac{2}{33} =$

(c)  $\frac{21}{25} \times \frac{10}{21} =$

(d)  $\frac{20}{30} \times \frac{30}{40} =$

(e)  $\frac{15}{18} \times \frac{12}{25} =$

(f)  $\frac{64}{78} \times \frac{27}{40} =$

(g)  $\frac{16}{17} \times \frac{5}{8} \times \frac{4}{15} =$

(h)  $\frac{14}{15} \times \frac{5}{7} \times \frac{6}{21} =$

(i)  $\frac{18}{16} \times \frac{8}{9} \times \frac{3}{20} =$

(j)  $\frac{3}{24} \times \frac{16}{14} \times \frac{21}{27} =$

4. Philippe lives  $\frac{8}{11}$  of a kilometer from Sarah. Philippe walked  $\frac{1}{4}$  of the way to Sarah's house, and then got a ride from his dad for the rest of the way.

*How far did Philippe walk?*

5. Grandma baked a pecan pie for the entire family. Grandpa ate  $\frac{1}{6}$  of the pie. Dad ate  $\frac{1}{5}$  of what was left. Mom ate  $\frac{1}{4}$  of what was left after that. My Sister ate  $\frac{1}{3}$  of what was left after that. I ate  $\frac{1}{2}$  of what was left after that.

*How much of the original pie was left for Grandma to eat? Who ate the most pie?*

6. Perry got up early one morning to surprise his wife with a cup of her favorite blend of coffee. Perry uses regular coffee and a decaf- blend that is  $\frac{1}{2}$  regular and  $\frac{1}{2}$  decaffeinated coffee. He puts 4 tablespoons of the decaf-blend and 3 tablespoons of regular in the coffee maker. *What is the fraction of regular coffee in Perry's mixture?*

7. Simon decided to create a flowerbed in front of his house.  $\frac{1}{2}$  of his flowerbed is planted with orange marigolds. He plants  $\frac{3}{4}$  of the rest of the garden with red roses. After that, he plants pink orchids in  $\frac{1}{2}$  of what remains. The rest of the garden is planted with yellow daffodils. *What fraction of his garden is planted in yellow daffodils?*

8. *How much pizza is left for Juanita to eat? Use your knowledge of *Multiplying Fractions* to create a scenario that would be best suited for this question.*