MONTH : SEPTEMBER

SESSION : 4

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 9

CHAPTER NAME : FRACTION

SUB-TOPIC : MULTIPLICATION OF FRACTIONS

EXERCISE 9 C

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE :

Enable the students

- To multiply a fraction by another fraction.

- To reduce to their lowest term

Multiplication of Fractions

Multiplying Fractions

Multiply the numerators

$$\frac{2}{5} \times \frac{3}{4} = \frac{6}{}$$

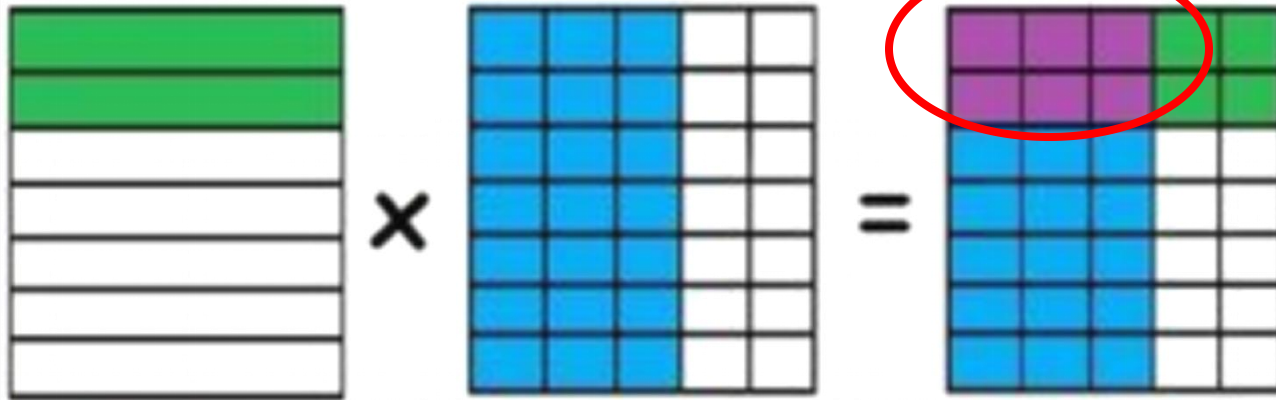**Multiply the denominators**

$$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$$

Reduce the fraction if necessary

$$\frac{6}{20} = \frac{3}{10}$$

MULTiPLYinG FraCTions

$$\frac{2}{7} \times \frac{3}{5} = \frac{6}{35}$$

Multiplication of Fractions

Multiplying Fractions

Example: 1

$$\frac{8}{15} \times \frac{2}{3}$$

$$= \frac{8 \times 2}{15 \times 3} \quad = \quad \frac{16}{45}$$

Example: 2

$$\frac{9}{16} \times \frac{8}{27}$$

$$= \frac{\overset{1}{9} \times \overset{1}{8}}{\underset{2}{16} \times \underset{3}{27}} \quad = \quad \frac{1}{6}$$

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Multiplication of Fractions

Example: 3

$$3\frac{5}{7} \times 2\frac{4}{5}$$

$$= \frac{26}{7} \times \frac{\overset{2}{\cancel{14}}}{5}$$

$$= \frac{52}{5} = 10\frac{2}{5}$$

Example: 1

$$2\frac{3}{5} \times 1\frac{1}{4} \times \frac{8}{13}$$

$$= \frac{\overset{1}{\cancel{13}}}{\underset{1}{\cancel{5}}} \times \frac{\overset{1}{\cancel{5}}}{\underset{1}{\cancel{4}}} \times \frac{\overset{2}{\cancel{8}}}{\underset{1}{\cancel{13}}}$$

$$= \frac{1 \times 1 \times 2}{1 \times 1 \times 1}$$

$$= \frac{2}{1}$$

$$= 2$$
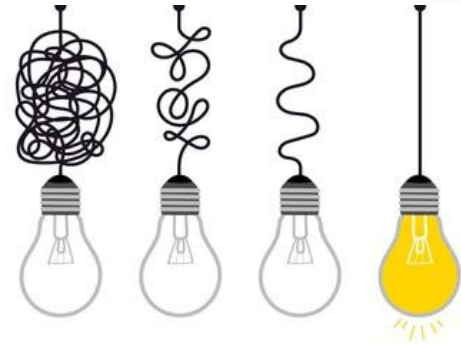
Example: 2

$$\frac{3}{4} \quad \times \quad \frac{5}{7} \quad \times \quad \frac{9}{11}$$

$$\frac{3 \times 5 \times 9}{4 \times 7 \times 11} \quad = \quad \frac{135}{308}$$

Properties of Multiplication
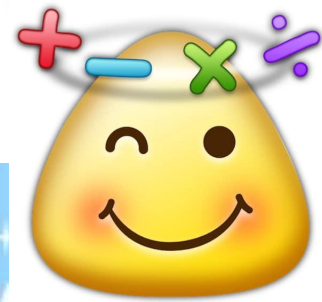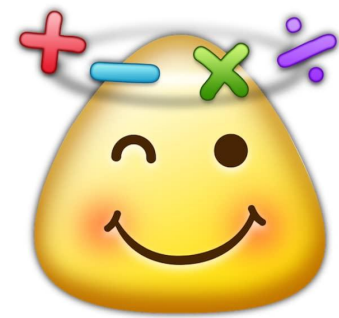
Changing the order of the numbers doesn't change the product.

The product of a fraction and 0 is 0.

The product of a fraction and 1 of the fraction itself.

Multiplying Fractions

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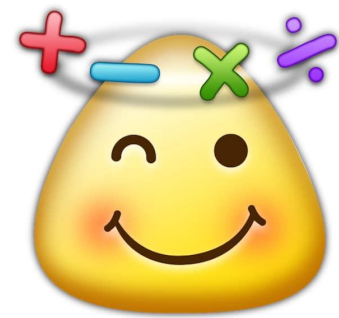## 1. Multiply

a. $\dfrac{5}{28} \times 7$

$$= \dfrac{5 \times \cancel{7}}{\cancel{28}\,4 \times 1} = \dfrac{5}{4} = 1\dfrac{1}{4}$$

b. $\dfrac{20}{21} \times \dfrac{7}{10} \times \dfrac{1}{2}$

$$= \dfrac{\cancel{20}^{2}}{21}_{3} \times \dfrac{\cancel{7}}{\cancel{10}} \times \dfrac{1}{\cancel{2}} = \dfrac{1}{3}$$

1. Multiply

c. $\dfrac{4}{5} \times \dfrac{11}{16} \times \dfrac{5}{8}$

$= \dfrac{\cancel{4} \times 11 \times \cancel{5}}{\cancel{5} \times \cancel{16} \times 8}$ $= \dfrac{11}{32}$

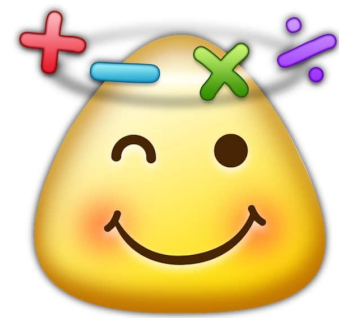**Multiplying Fractions**

d. $\dfrac{17}{24} \times \dfrac{3}{34} \times \dfrac{6}{7}$

$= \dfrac{\cancel{17} \times 3 \times \cancel{6}}{\cancel{24} \times \cancel{34} \times 7}$ $= \dfrac{3}{56}$

1. Multiply

e. $\dfrac{5}{9}$ × $\dfrac{5}{12}$ × $\dfrac{24}{25}$

$= \dfrac{\cancel{5} \times \cancel{5} \times \cancel{24}^{2}}{9 \times \cancel{12} \times \cancel{25}_{5}}$ $= \dfrac{2}{9}$

f. $\dfrac{4}{5}$ × $1\dfrac{6}{7}$ × 0 $= 0$
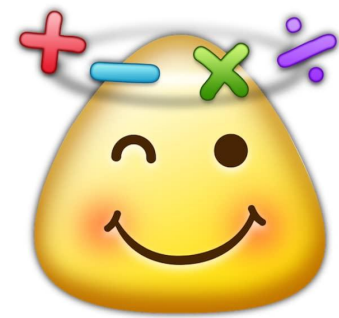
EXERCISE : 9 C

1. MULTIPLY

g. $\dfrac{1}{4} \times 2\dfrac{1}{2} \times \dfrac{4}{5} \times 3\dfrac{1}{2} \times \dfrac{4}{5}$

$= \dfrac{1}{\cancel{4}} \times \dfrac{\cancel{5}}{\cancel{2}} \times \dfrac{\cancel{4}}{\cancel{5}} \times \dfrac{7}{\cancel{2}} \times \dfrac{\overset{2}{\cancel{4}}}{5}$

$= \dfrac{7}{5} \qquad = \quad 1\dfrac{2}{5}$

Multiplying Fractions

➢ **Complete exercise 9 C in the notebook.**

Students are able to multiply a fraction by another fraction and reduce the same to its lowest term.

THANKING YOU
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