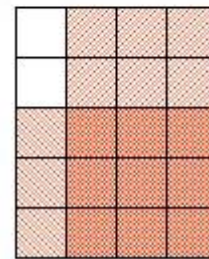
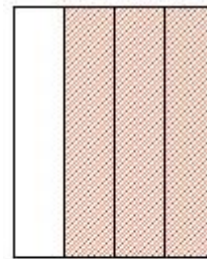


Multiplication of Fractions

Multiply $\frac{3}{5} \times \frac{3}{4}$

To multiply fractions you can use a rectangle model.
Follow these guidelines:

- Draw a rectangle and divide the rectangle into **4** equal columns.
This is for the denominator of $\frac{3}{4}$.
- Shade **3** of the columns.
This is for numerator of $\frac{3}{4}$.
- Divide the rectangle in **5** equal rows.
This is for the denominator of $\frac{3}{5}$.
- Shade **3** of the rows with diagonal lines.
This is for the numerator of $\frac{3}{5}$.
- Count how many pieces the rectangle is divided into. There are **20** pieces.
This is a new denominator.
- Count how many pieces have overlapping lines and shading. There are **9**.
This is the new numerator.



So, $\frac{3}{5} \times \frac{3}{4} = \frac{9}{20}$

To find the product of two fractions we multiply the numerator by the numerator and the denominator by the denominator

$$\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d} = \frac{ac}{bd}$$

The final product should be in simplest form or a mixed number.

Examples:

A- Find the product.

$$1) \frac{2}{5} \times \frac{3}{7}$$

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

$$2) \frac{1}{6} \times \frac{3}{4}$$

$$\frac{1 \times 3}{6 \times 4} = \frac{3}{24} = \frac{1}{8}$$

$$3) \frac{4}{3} \times \frac{5}{8}$$

$$\frac{4 \times 5}{3 \times 8} = \frac{20}{24} = \frac{5}{6}$$

$$4) \frac{7}{9} \times \frac{2}{3}$$

$$\frac{7 \times 2}{9 \times 3} = \frac{14}{27}$$