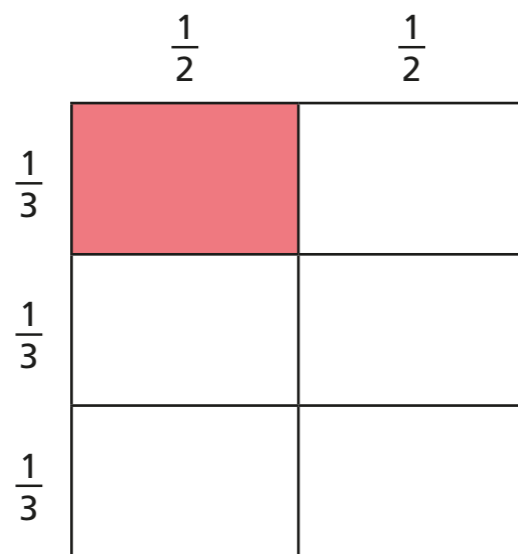


Multiply fractions by fractions

- 1 Dexter works out $\frac{1}{2} \times \frac{1}{3}$ using a grid method.

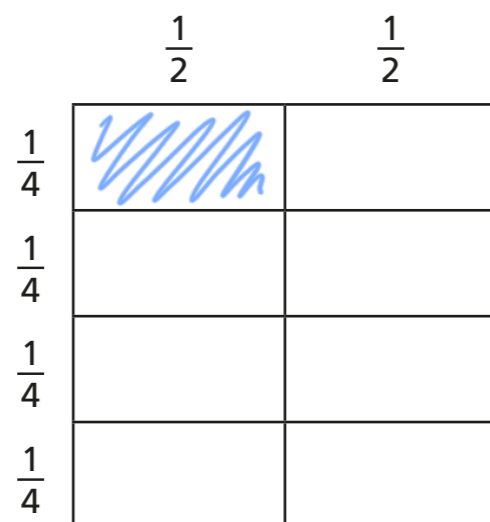


Explain how this shows $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

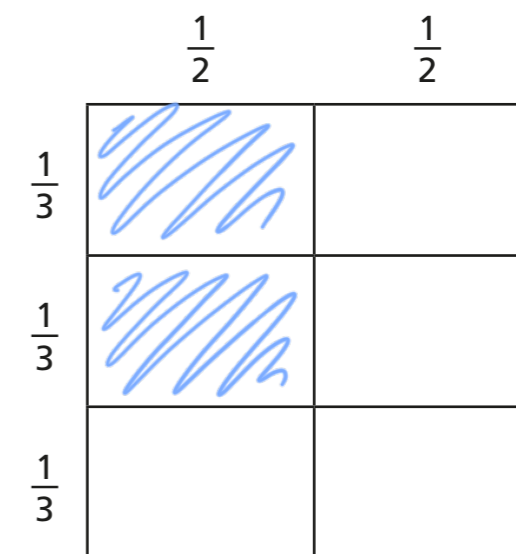
Split into halves vertically and thirds horizontally. $\frac{1}{6}$ of the whole shape is shaded.

- 2 Shade the diagrams to show the fraction multiplications.
Complete the multiplications.

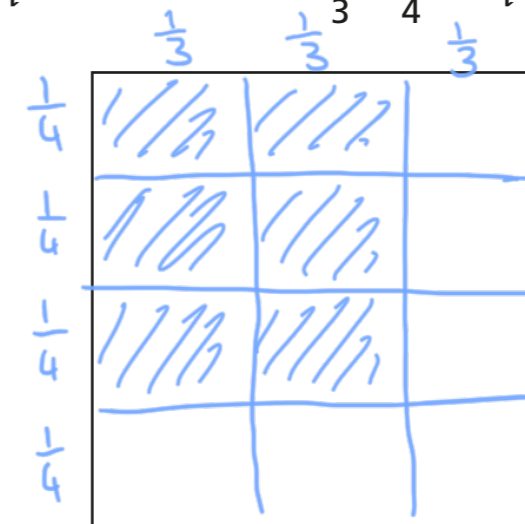
a) $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$



b) $\frac{1}{2} \times \frac{2}{3} = \frac{2}{6} = \frac{1}{3}$



- 3 a) Divide the square to show that $\frac{2}{3} \times \frac{3}{4}$ is equal to $\frac{6}{12}$



- b) Mo says $\frac{2}{3} \times \frac{3}{4}$ is equal to $\frac{1}{2}$

Is Mo correct? Yes

Explain your answer.

$\frac{6}{12}$ is equivalent to $\frac{1}{2}$

4 Complete the calculations.

a) $\frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$

e) $\frac{3}{4} \times \frac{1}{5} = \frac{3}{20}$

b) $\frac{1}{5} \times \frac{1}{6} = \frac{1}{30}$

f) $\frac{2}{5} \times \frac{5}{6} = \frac{1}{3}$

c) $\frac{1}{56} = \frac{1}{7} \times \frac{1}{8}$

g) $\frac{5}{7} \times \frac{5}{8} = \frac{25}{56}$

d) $\frac{1}{8} \times \frac{1}{9} \times \frac{1}{10} = \frac{1}{720}$


h) $\frac{3}{8} \times \frac{2}{9} \times \frac{3}{10} = \frac{1}{40}$

5 Use the diagram to complete the calculations.

a) $\frac{1}{3}$ of $\frac{1}{4} = \frac{1}{12}$



b) $\frac{2}{3}$ of $\frac{3}{4} = \frac{1}{2}$



c) What do you notice about your answers?
Talk to your partner.

6 Fill in the missing numbers.

a) $\frac{1}{10} = \frac{1}{2} \times \frac{1}{5}$

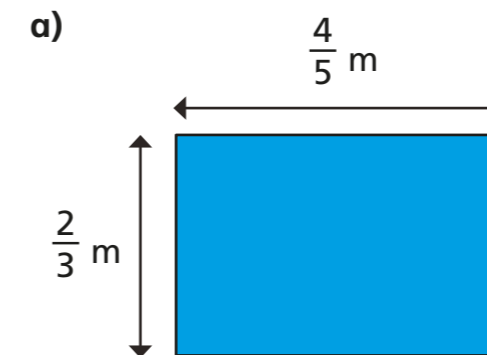
b) $\frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$

7 Fill in the missing numbers.

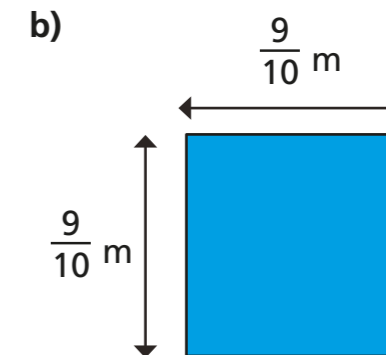
a) $\frac{1}{10} = \frac{1}{4} \times \frac{2}{5}$

b) $\frac{1}{4} = \frac{1}{4} \times \frac{5}{5}$

8 Calculate the area of the shapes.

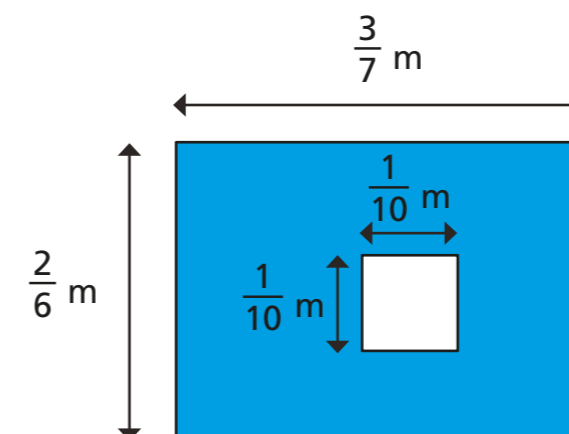


Area = $\frac{8}{15} \text{ m}^2$



Area = $\frac{81}{100} \text{ m}^2$

9 Work out the area of the shaded part.



$\frac{93}{700} \text{ m}^2$