2.3.21 Fractions

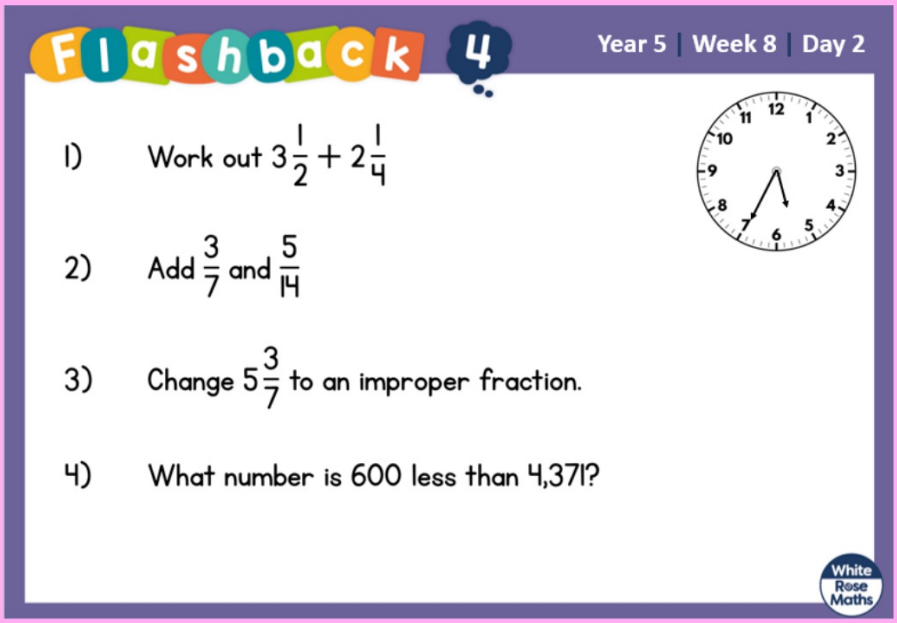
Learning Objective:
We are learning to multiply non-unit fractions by an integer.

I will be successful if:

- I can see multiplication as repeated addition.
- I can give my answer in the simplest form.
- I can use bar models and number lines to show multiplication of fractions.

## Key Vocabulary

- fractions as part of a whole
- representations
- numerator
- denominator
- integer (whole number)
- non-unit and unit fractions
- improper fractions
- mixed number
- addition
- subtraction
- difference




Challenge - compare decimals using ≤ or ≥

5) 0.144 ☐ 0.411

6) 2.55 ☐ 0.258

7) 0.417 ☐ 0.47

8) 0.061 ☐ 0.16

## Flashback 4

Year 5 | Week 8 | Day 2

1) Work out $3\frac{1}{2} + 2\frac{1}{4}$ $5\frac{3}{4}$

2) Add $\frac{3}{7}$ and $\frac{5}{14}$ $\frac{11}{14}$

3) Change $5\frac{3}{7}$ to an improper fraction. $\frac{38}{7}$

4) What number is 600 less than 4,371? 3,771

White Rose Maths

Challenge - compare decimals using ≤ or ≥

5) 0.144 < 0.411

6) 2.55 > 0.258

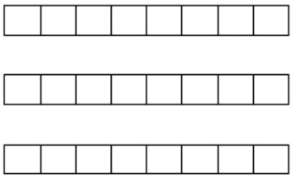
7) 0.417 < 0.47

8) 0.061 < 0.16

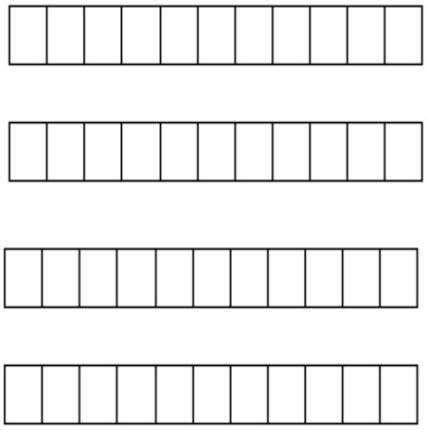
Count the number of ninths to work $3 \times \frac{2}{9}$

Use this method to work out:

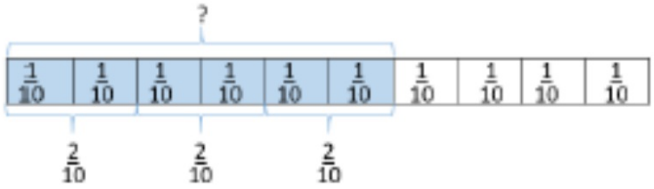
$\frac{3}{8} \times 2$



$4 \times \frac{2}{11}$



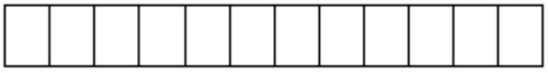
Use the model to help you solve $3 \times \frac{2}{10}$

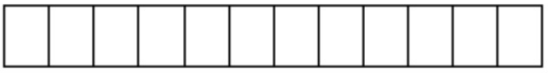



Use this method to work out:

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

$4 \times \frac{5}{12}$





Use the number line to help you solve $2 \times \frac{3}{7}$


Use this method to work out:

$\frac{3}{10} \times 3$

$4 \times \frac{3}{20}$

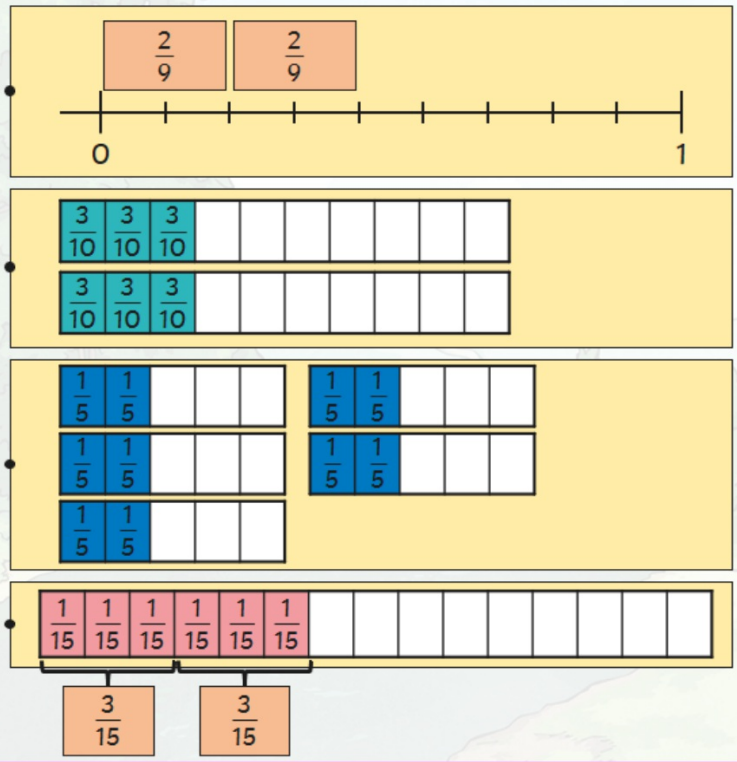
Match the calculation to the correct model that represents it and then complete the calculation.

$2 \times \frac{3}{10} =$ ☐

$\frac{2}{9} \times 2 =$ ☐

$\frac{3}{15} \times 2 =$ ☐

$5 \times \frac{2}{5} =$ ☐



# Answers

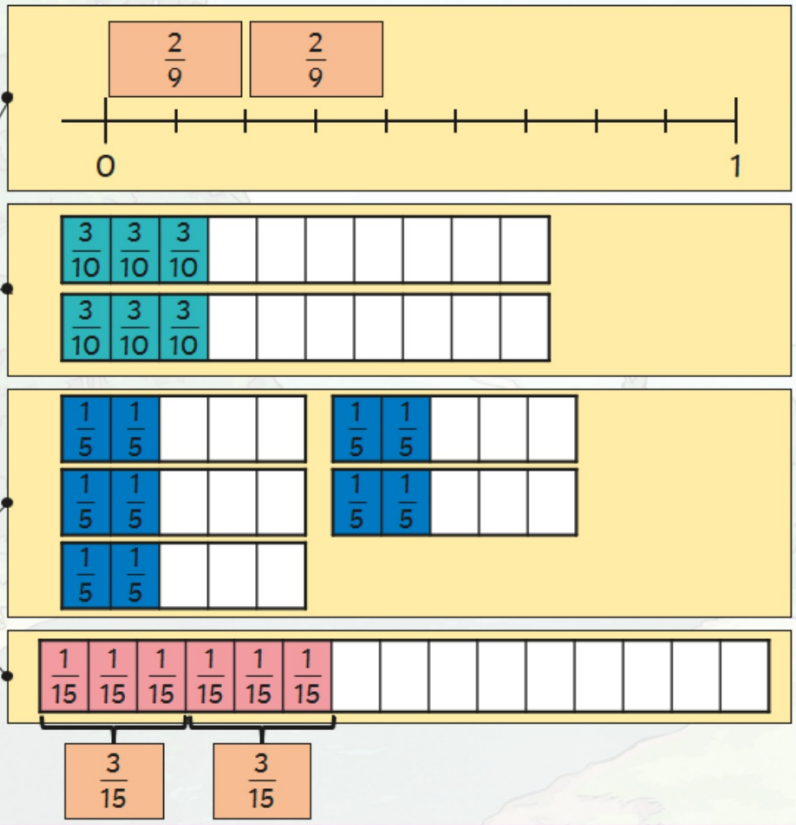
Match the calculation to the correct model that represents it and then complete the calculation.

$2 \times \frac{3}{10} = \frac{6}{10} = \frac{3}{5}$

$\frac{2}{9} \times 2 = \frac{4}{9}$

$\frac{3}{15} \times 2 = \frac{6}{15} = \frac{2}{5}$

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



**Find 3 possible solutions where the product is less than 1.**

$$\frac{3}{\square} \times \square = \frac{\square}{15}$$

**Now find 3 possible solutions where the product is greater than 1 but less than 2.**

$$\frac{3}{\square} \times \square = 1\frac{\square}{15}$$

**Possible answers include:**

$\frac{3}{15} \times 2 = \frac{6}{15} = \frac{2}{5}$

$\frac{3}{15} \times 3 = \frac{9}{15} = \frac{3}{5}$

$\frac{2}{5} \times 2 = \frac{4}{5} = \frac{12}{15}$

**Possible answers include:**

$\frac{3}{15} \times 6 = \frac{18}{15} = 1\frac{3}{15}$

$\frac{3}{15} \times 7 = \frac{21}{15} = 1\frac{6}{15}$

$\frac{3}{5} \times 3 = \frac{9}{5} = \frac{27}{15} = 1\frac{12}{15}$

2.3.21

Have a go at the questions on the sheet attached.

# Reasoning challenges

Use the digit cards only once to complete these multiplications.

9 2 4 6 3

$\square \times \frac{\square}{\square} = \frac{\square}{\square}$

1 2 3 4 5 6

$\square \times \frac{\square}{\square} = \frac{\square}{\square}$

True or False? Multiply non-unit fractions by an integer

If I multiply an integer by a proper fraction, the product will be smaller than the integer.

White Rose Maths

Whitney has calculated $4 \times \frac{3}{14}$


From the picture I can see that $4 \times \frac{3}{14} = \frac{12}{56}$

Do you agree?

Explain why.