3.3.21 Fractions

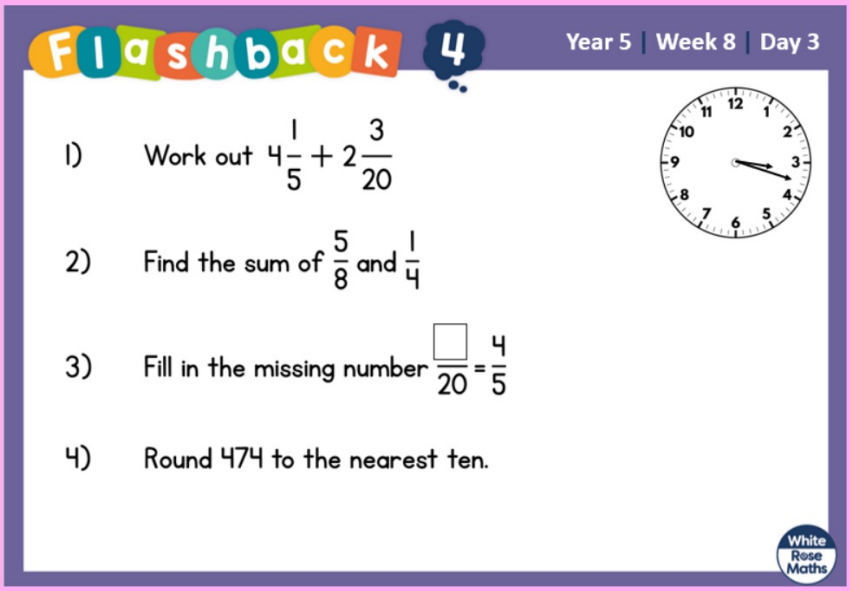
Learning Objective:
We are learning to multiply mixed numbers by an integer.

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 to show multiplication of mixed numbers.

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



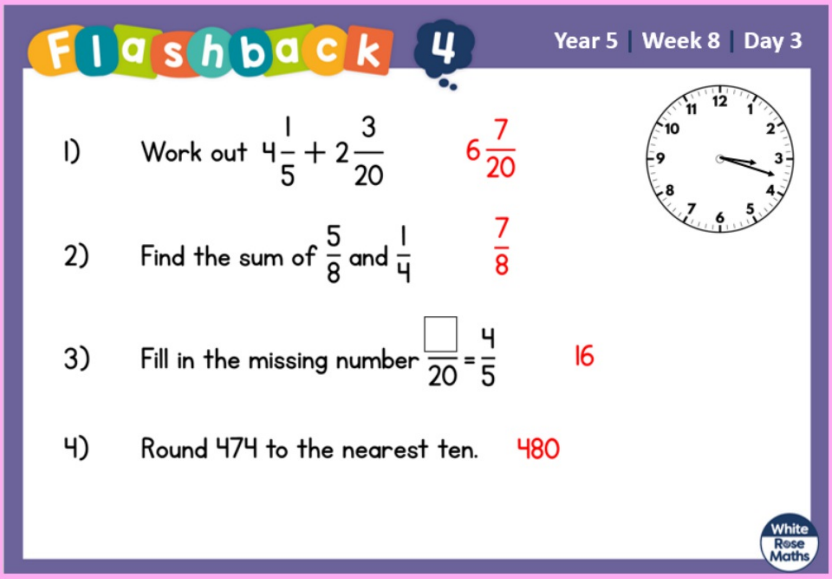
Challenge - compare decimals using ≤ or ≥

5) 0.734 ☐ 0.674

6) 0.376 ☐ 1.38

7) 0.88 ☐ 0.808

8) 0.626 ☐ 0.662



Challenge - compare decimals using ≤ or ≥

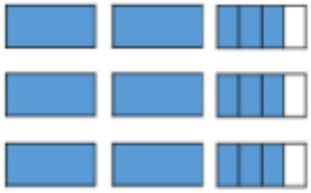
5) 0.734 > 0.674

6) 0.376 < 1.38

7) 0.88 > 0.808

8) 0.626 < 0.662

Partition your fraction to help you solve $2\frac{3}{4} \times 3$



$2 \times 3 = 6$

$\frac{3}{4} \times 3 = \frac{9}{4} = 2\frac{1}{4}$

$6 + 2\frac{1}{4} = 8\frac{1}{4}$

Use this method to answer:

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

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

$$1\frac{5}{6} \times 3 = \frac{11}{6} \times 3 = \frac{33}{6} = 5\frac{3}{6} = 5\frac{1}{2}$$

Convert from a mixed number to an improper fraction

Convert back to a mixed number

Simplify

Use this method to answer:

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

Ted is making bubble mixture for his bubble machine. To make one portion, he mixes $3\frac{3}{8}$ litres of water with $2\frac{3}{5}$ tablespoons of washing-up liquid.

Ted makes one portion of bubble mixture for himself and one each for his three friends.

How much water will he need?

How many tablespoons of washing-up liquid will he need?

Answer

Ted is making bubble mixture for his bubble machine. To make one portion, he mixes $3\frac{3}{8}$ litres of water with $2\frac{3}{5}$ tablespoons of washing-up liquid.

Ted makes one portion of bubble mixture for himself and one each for his three friends.

How much water will he need?

$3\frac{3}{8} \times 4 =$

$3 \times 4 = 12$

$\frac{3}{8} \times 4 = \frac{12}{8} = 1\frac{4}{8} = 1\frac{1}{2}$

$12 + 1\frac{1}{2} = 13\frac{1}{2}$ litres of water

How many tablespoons of washing-up liquid will he need?

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

$2 \times 4 = 8$

$\frac{3}{5} \times 4 = \frac{12}{5} = 2\frac{2}{5}$

$8 + 2\frac{2}{5} = 10\frac{2}{5}$ tablespoons of washing-up liquid

3.3.21

Have a go at the questions on the sheet attached.

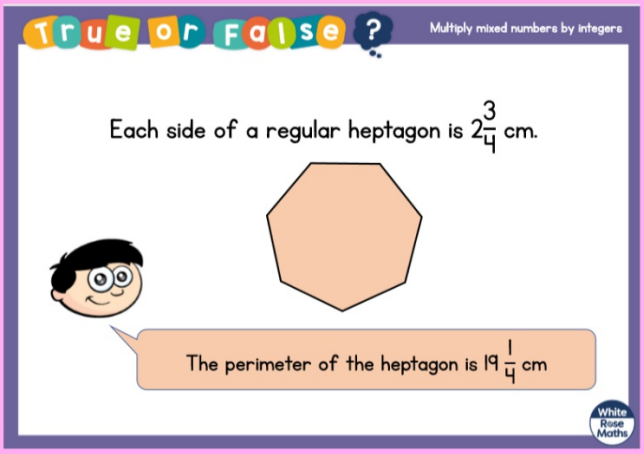
Reasoning challenges

Jack runs $2\frac{2}{3}$ miles three times per week.

Dexter runs $3\frac{3}{4}$ miles twice a week.

Who runs the furthest during the week?

Explain your answer.



Work out the missing numbers.

$$2\frac{\square}{8} \times \square = 7\frac{7}{8}$$

Explain how you worked it out.