

17.2.22

*LO: To multiply mixed numbers by an integer.*

*I know how to convert mixed numbers to improper fractions.*

*I can multiply mixed numbers by an integer.*

*I understand that I can use my knowledge of repeated addition to help with multiplying fractions.*

## Flashback 4.

### Flashback 4

Year 5 | Wee

1) Work out  $\frac{5}{8} - \frac{3}{16}$

2) Add together  $\frac{2}{3}$  and  $\frac{5}{6}$

3) Continue the sequence.  $1\frac{3}{8}, 1\frac{5}{8}, 1\frac{7}{8}, \dots$

4) What is the value of the 6 in the number 5.06?



## Flashback 4

- 1) Work out  $\frac{5}{8} - \frac{3}{16}$
- 2) Add together  $\frac{2}{3}$  and  $\frac{5}{6}$
- 3) Continue the sequence.  $1\frac{3}{8}, 1\frac{5}{8}, 1\frac{7}{8}, \dots$
- 4) What is the value of the 6 in the nu

GET READY 

$$1) \quad 2 \times \frac{3}{11} =$$

$$2) \quad 2 \times 5 =$$

$$3) \quad 2 \times 5 \frac{3}{11} =$$

LET'S LEARN

One bottle of milk contains  $2\frac{3}{13}$  litres.

How much milk is in 4 bottles?

$$2\frac{3}{13} \times 4 =$$

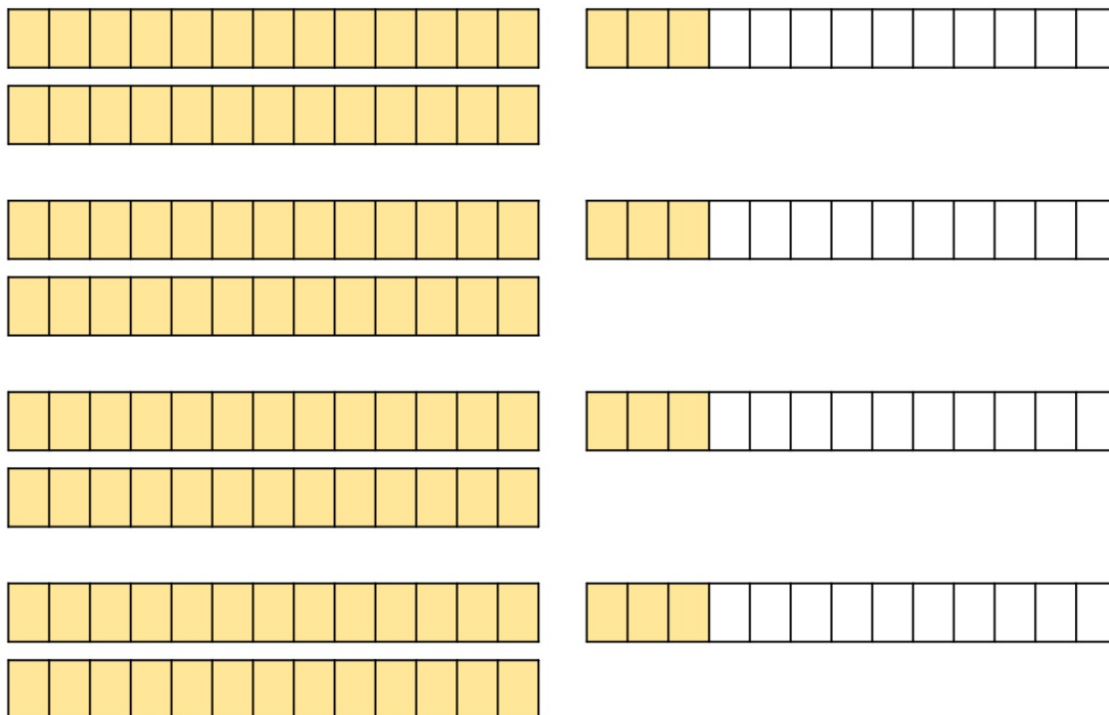
$$2\frac{3}{13} \times 4$$

$$2 \times 4$$

$$\frac{3}{13} \times 4$$

Another way to visualise the calculation:

$$4 \times 2 \frac{3}{13} = 8 \frac{12}{13}$$

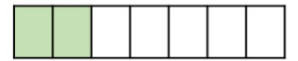
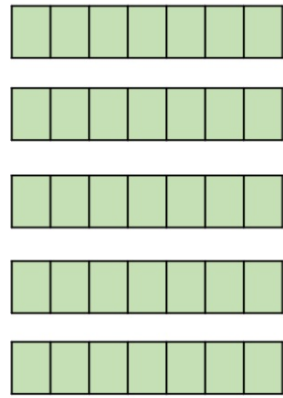


$$3 \times 5 \frac{2}{7} =$$

$$3 \times \boxed{5} =$$

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

$$\boxed{\phantom{00}} + \boxed{\phantom{00}} =$$



Do together:

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



$$4 \times \square =$$



$$4 \times \square =$$

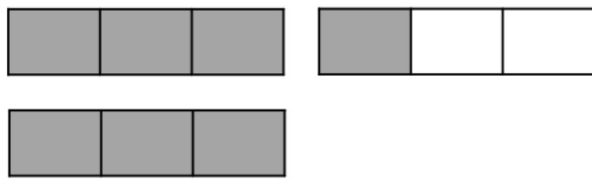


$$\square + \square =$$



Talk it through and have a go on whiteboards.

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



$$5 \times \boxed{2} =$$

$$5 \times \boxed{\frac{1}{3}} = \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

$$\boxed{\phantom{00}} + \boxed{\phantom{00}} =$$



Have a go at questions 1 - 3.

LA start with times table practise then complete worksheet

5 B's  
Brain  
Book  
Boar  
Buds  
Boss

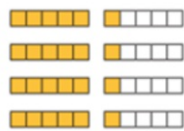
1 Complete the calculations.

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

$4 \times 1 = \square$

$4 \times \frac{1}{5} = \square$

$\square + \square = \square$

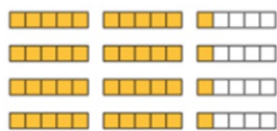


b)  $4 \times 2\frac{1}{5}$

$\square \times 2 = \square$

$4 \times \square = \square$

$\square + \square = \square$

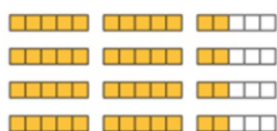


c)  $4 \times 2\frac{2}{5}$

$\square \times \square = \square$

$4 \times \square = \square = \square$

$\square + \square = \square$



2 Complete the multiplications.

a)  $3 \times 8\frac{2}{7} = \square$

b)  $2 \times 12\frac{2}{11} = \square$

c)  $6\frac{2}{11} \times 4 = \square$

3 One bag of potatoes weighs  $1\frac{3}{4}$  kg.

How much do 5 bags of potatoes weigh?

4 Complete the calculations.

a)  $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} = \square$

b)  $4\frac{3}{7}$

5

$5 \times 3\frac{2}{11}$  is equal to  
 $3 \times 5\frac{2}{11}$

Do you agree with Ron?  
Explain why.

Extension activity:

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 th

$2\frac{5}{8}$

Explain how

HA to start on 1c

The key is to convert the improper fraction into a whole number.

$$4\frac{5}{9} \times 9 = \text{Integer answer}$$

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

On whiteboards

$$A) 5 \times 86 \frac{3}{10}$$

$$B) 12 \frac{3}{7} \times 14$$

$$C) 6 \frac{5}{14} \times 42$$

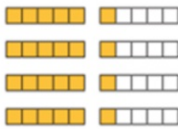
Integer answer	Non-integer answer

Have a go at questions 4 and 5.

5 B's:  
Brain  
Book  
Board  
Buddy  
Boss

calculations.

$$\left. \begin{array}{l} \square \\ \square \\ \square \end{array} \right\} = \square$$



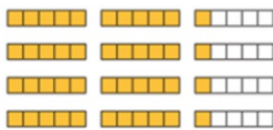
2 Complete the multiplications.

a)  $3 \times 8\frac{2}{7} = \square$

b)  $2 \times 12\frac{2}{11} = \square$

c)  $6\frac{2}{11} \times 4 = \square$

$$\left. \begin{array}{l} \square \\ \square \\ \square \end{array} \right\} = \square$$



3 One bag of potatoes weighs  $1\frac{3}{4}$  kg.

How much do 5 bags of potatoes weigh?

4 Complete the calculations.

a)  $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} = \square$

b)  $4\frac{3}{7} \times 5 = 20 + \square = \square$

$$\left. \begin{array}{l} \square \\ \square \\ \square \end{array} \right\} = \square$$



5

$5 \times 3\frac{2}{11}$  is equal to  
 $3 \times 5\frac{2}{11}$



Do you agree with Ron?  
Explain why.

Extension activity:

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.

### Extension activity:

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.

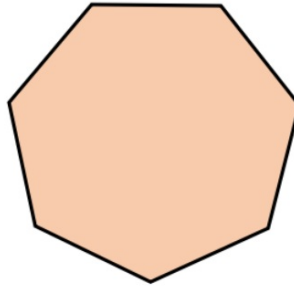
$$2\frac{\boxed{\phantom{0}}}{8} \times \boxed{\phantom{0}} = 7\frac{7}{8}$$

Explain how you worked it out.

True or False ?

Multiply mixed numbers by integers

Each side of a regular heptagon is  $2\frac{3}{4}$  cm.



The perimeter of the heptagon is  $19\frac{1}{4}$  cm

True or False ?

Multiply mixed numbers by integers

True

$$2\frac{3}{4} \times 7 = 19\frac{1}{4}$$

**Year 5  
NUMERACY  
TARGET GRIDS**

I can read Roman numerals to 1000 (M) and recognise years written in numerals.

I can solve number problems and practical problems that involve all of the below.

I can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.

I can use negative numbers in context; count forwards and backwards with positive and negative whole numbers through 0

I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

I know what each digit represents in numbers to 1 000 000.

I can read, write, order and compare numbers to at least 1 000 000.

**Number and Place Value**

I can solve  $\times$  and  $\div$  problems, scaling by fractions and ratio.

I can solve problems involving  $\times$  and  $\div$  including factors, multiples square and cubes.

I can recognise and use square and cube numbers.

I can  $\times$  and  $\div$  whole numbers and decimals by 10, 100 and 1000.

I can multiply and divide numbers mentally.

I can divide numbers up to 4 digits by a one or two-digit number.

I can multiply numbers up to 4 digits by a one or two-digit number.

I can establish whether a number is prime and recall prime numbers up to 19.

I know and use the vocabulary of prime numbers, prime factors and composite.

I can identify multiples and factors including finding all factor pairs.

**Multiplication and Division**

I can use all four operations to solve problems involving measure using decimal notation, including scaling.

I can solve problems involving converting between units of time.

I can estimate the volume and capacity.

I can estimate the area of irregular shapes.

I can calculate and compare the area of rectangles (including squares)

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres & metres.

I understand and use approximate equivalences between metric units and imperial units such as inches & pounds

I can convert between different units of metric measure.

**Measurements**

I can solve problems involving decimals to 3 decimal places.

I can read and order numbers with 3 decimal places.

I can round decimals with 2 decimal places to the nearest whole number & to one decimal place.

I can recognise and use 1000ths and relate them to 10ths, 100ths and decimal equivalents.

I can multiply proper fractions and mixed numbers by whole numbers.

I can  $+$  and  $-$  fractions with the same denominator and denominators that are multiples of the same number.

I can recognise mixed number and improper fractions and convert from one form to another.

I can identify, name and write equivalent fractions of a given fraction.

I can compare and order fractions whose denominators are all multiples of the same number.

**Fractions**

I can identify, describe and represent the position of a shape following a reflection or translation.

I can distinguish between regular and irregular polygons.

I can use the properties of rectangles to deduce related facts and find missing lengths and angles.

I can identify other multiples of  $90^\circ$

I can identify angles at point on a straight line and  $1/2$  a turn.

I can identify angles at a point and one whole turn.

I can draw angles and measure them in degrees ( $^\circ$ )

I know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.

I can identify 3-D shapes, including cubes and other cuboids from 2-D drawings.

**Geometry**

I can read and write decimal numbers as fractions.

I can write  $\frac{1}{10}$  as a fraction and decimal equivalents.

I can complete, read and interpret information in tables including timetables.

I can solve 'difference' problems using information presented in a line graph.

I can solve 'sum' problems using information presented in a line graph.

I can solve 'comparison' problems using information presented in a line graph.

**Statistics**