Monday

Multiply fractions by integers
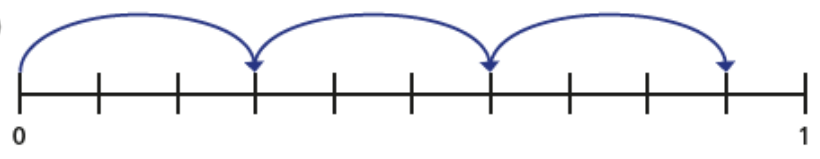
1 Complete the calculations.
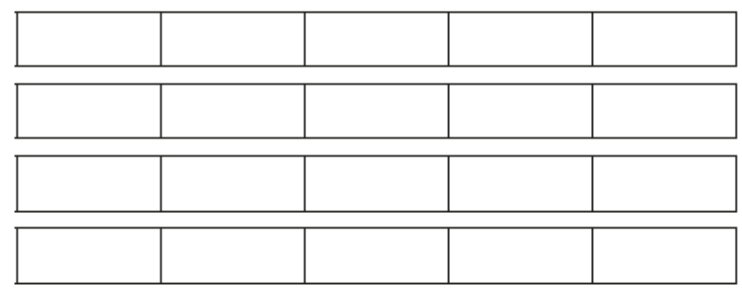
a)

$\frac{2}{7} \times 2 =$ ☐

b)

0 ——————————————————— 1

$3 \times \frac{3}{10} =$ ☐

2 a) Shade the bar models to show $\frac{2}{5} \times 4$

b) Complete the multiplication.

$\frac{2}{5} \times 4 =$ ☐

3 Complete the calculations.

a) $\frac{1}{3} \times 1 =$ ☐

$\frac{1}{3} \times 2 =$ ☐

$\frac{1}{3} \times 3 =$ ☐

$\frac{1}{3} \times 4 =$ ☐

$\frac{1}{3} \times 5 =$ ☐

$\frac{1}{3} \times 6 =$ ☐

b) $\frac{3}{4} \times 1 =$ ☐

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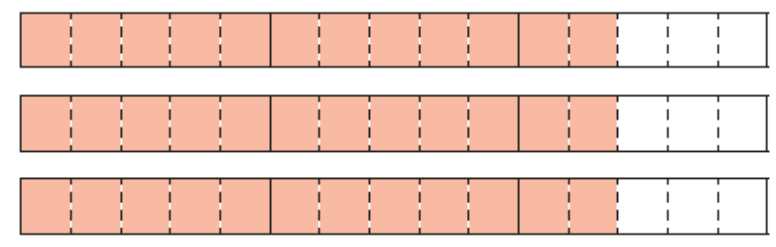
$\frac{3}{4} \times 3 =$ ☐

$\frac{3}{4} \times 4 =$ ☐

$\frac{3}{4} \times 5 =$ ☐

$\frac{3}{4} \times 6 =$ ☐

What patterns do you notice?

4 Complete the multiplication.

$2\frac{2}{5} \times 3 =$ ☐

What method did you use? Is there a different method you could have used?

5 Match the calculations.

| $\frac{2}{3} + \frac{2}{3}$ | | $\frac{1}{2} \times 6$ |

| $\frac{1}{4} \times 24$ | | $18 \times \frac{1}{4}$ |

| $\frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4}$ | | $\frac{1}{6} \times 10$ |

| $\frac{5}{12} \times 4$ | | $12 \times \frac{1}{2}$ |

| $1\frac{1}{2} \times 3$ | | $\frac{1}{3} \times 4$ |

6 Write each answer as a mixed number in its simplest form.

a) $1\frac{1}{5} \times 2 =$ ☐

d) $2\frac{2}{5} \times 5 =$ ☐

b) $2\frac{1}{6} \times 3 =$ ☐

e) $7 \times 3\frac{1}{2} =$ ☐

c) $2\frac{2}{5} \times 4 =$ ☐
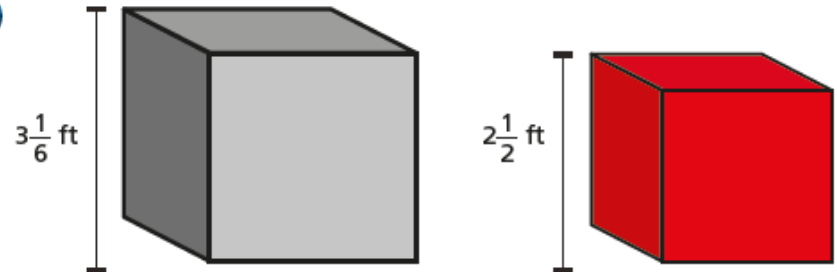
f) $\frac{11}{15} \times 7 =$ ☐

7 Fill in the missing numbers.

a) $2\frac{\square}{7} \times 3 = 6\frac{6}{7}$

b) $2\frac{\square}{8} \times 3 = 7\frac{1}{2}$

8 Tommy's dog eats $3\frac{1}{2}$ tins of food a week.

How many tins does she eat in a year?

☐

9

$3\frac{1}{6}$ ft

$2\frac{1}{2}$ ft

Jack builds a tower using grey blocks.

Alex builds a tower using red blocks.
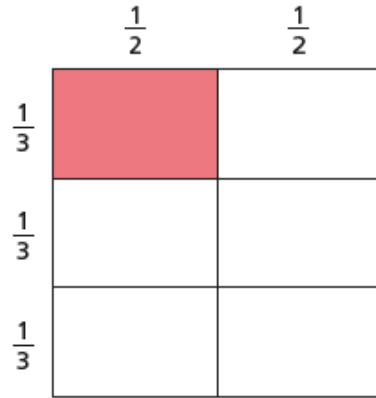
The towers are exactly the same height.

How many blocks could they each have used?

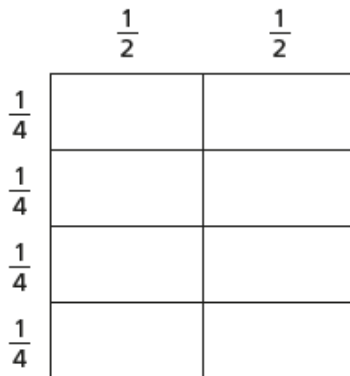_____

_____

Tuesday

Multiply fractions by fractions

1 Dexter works out $\frac{1}{2} \times \frac{1}{3}$ using a grid method.
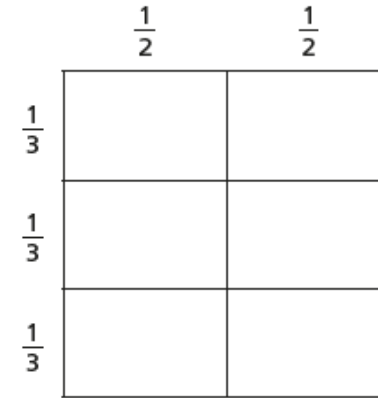
Explain how this shows $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

_____

_____

2 Shade the diagrams to show the fraction multiplications.

Complete the multiplications.

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

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

3 a) Divide the square to show that $\frac{2}{3} \times \frac{3}{4}$ is equal to $\frac{6}{12}$
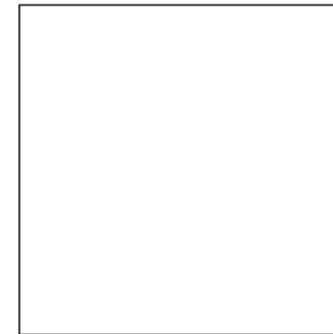
b) Mo says $\frac{2}{3} \times \frac{3}{4}$ is equal to $\frac{1}{2}$

Is Mo correct? _____

Explain your answer.

_____

_____

4 Complete the calculations.

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

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

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

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

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

f) $\frac{2}{5} \times \frac{5}{6} = \boxed{}$
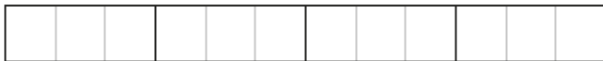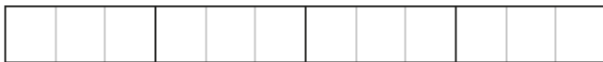
g) $\frac{5}{7} \times \frac{5}{8} = \boxed{}$

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

5 Use the diagram to complete the calculations.

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

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

c) What do you notice about your answers?

Talk to your partner.

6 Fill in the missing numbers.
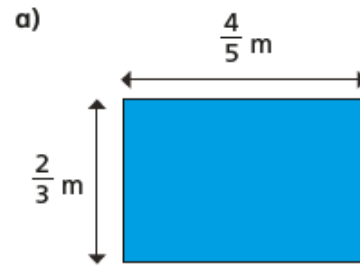
a) $\frac{1}{10} = \frac{1}{2} \times \frac{1}{\boxed{}}$

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

7 Fill in the missing numbers.

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

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

8 Calculate the area of the shapes.

a)
$\frac{4}{5}$ m

$\frac{2}{3}$ m

Area = $\boxed{}$ m²

b)
$\frac{9}{10}$ m

$\frac{9}{10}$ m
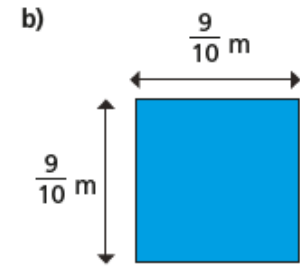
Area = $\boxed{}$ m²

9 Work out the area of the shaded part.

$\frac{3}{7}$ m

$\frac{2}{6}$ m

$\frac{1}{10}$ m

$\frac{1}{10}$ m

$\boxed{}$
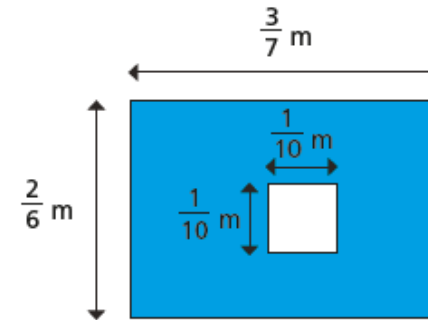
Wednesday

Divide fractions by integers (2)

1

$$\frac{4}{5} \div 2 \qquad \frac{4}{5} \div 3$$
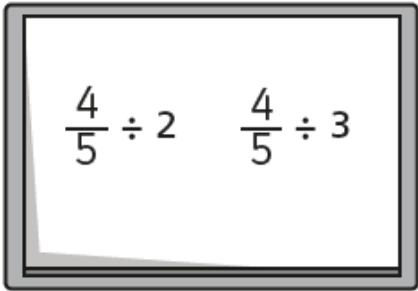
a) Write two things that are the same about the calculations.

_____

_____

_____

b) Write one thing that is different about the calculations.

_____

c) Draw a diagram to help you work out the answer to $\frac{4}{5} \div 2$

d) Draw a diagram to help you work out the answer to $\frac{4}{5} \div 3$

2 Complete the divisions using the diagrams to help you.

a) $\frac{1}{3} \div 2 = \boxed{}$

b) $\frac{1}{3} \div 3 = \boxed{}$

c) $\frac{2}{3} \div 3 = \boxed{}$

3 $\frac{3}{4}$ of a kilogram of rice is divided equally between two bowls.

Rice

How much rice is in each bowl?

$\boxed{}$

4 Work out the divisions.

a) $\dfrac{1}{5} \div 7 = \boxed{}$

f) $\boxed{} = \dfrac{5}{6} \div 12$

b) $\boxed{} = \dfrac{1}{6} \div 3$

g) $\dfrac{8}{3} \div 7 = \boxed{}$

c) $\dfrac{1}{4} \div 9 = \boxed{}$

h) $\boxed{} = \dfrac{19}{20} \div 5$

d) $\boxed{} = \dfrac{1}{7} \div 6$

l) $\dfrac{1}{100} \div 25 = \boxed{}$

e) $\dfrac{4}{9} \div 7 = \boxed{}$

J) $\boxed{} = \dfrac{45}{50} \div 20$

5 Write <, > or = to complete each statement.

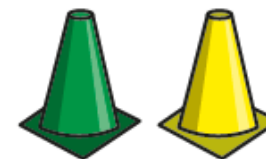a) $\dfrac{1}{3} \div 5 \bigcirc \dfrac{1}{5} \div 3$

b) $\dfrac{1}{3} \div 3 \bigcirc \dfrac{1}{5} \div 5$

c) $\dfrac{3}{5} \div 5 \bigcirc \dfrac{3}{5} \div 3$

6 There are some cones in the PE shed.

Classes 1, 2 and 3 share them equally.

- Class 1 put theirs into 4 equal piles.
- Class 2 put theirs into 5 equal piles.
- Class 3 put theirs into 11 equal piles.

What fraction of the whole number of cones is in each pile?

	Fraction in each pile
Class 1	
Class 2	
Class 3	

7 a) Which of these statements are true? Tick your answers.

$\dfrac{1}{2} \div 2$ *is equal to* $\dfrac{1}{2} \times \dfrac{1}{2}$ $\square$

$\dfrac{1}{2} \div 4 = \dfrac{1}{2} \times \dfrac{1}{4}$ $\square$

$\dfrac{1}{2} \div 3 = \dfrac{1}{2} \times \dfrac{1}{3}$ $\square$

$\dfrac{1}{2} \div 5 = \dfrac{1}{2} \times \dfrac{1}{5}$ $\square$

b) What do you notice?

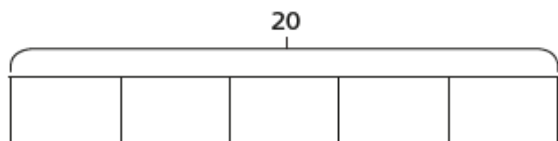Is it only true for halves?

Does it work for non-unit fractions?

Talk to a partner.

Thursday

Fractions of an amount

1

20

a) Shade $\frac{1}{5}$ of the bar model.

b) What is $\frac{1}{5}$ of 20?

2 Use your times tables knowledge to solve the calculations.

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

d) $\frac{1}{10}$ of 80 cm =

b) $\frac{1}{4}$ of £20 =

e) $\frac{1}{12}$ of 60 =

c) $\frac{1}{5}$ of 35 m =

f) $\frac{1}{7}$ of 84 kg =

Now use your answers to solve these calculations.

a) $\frac{2}{3}$ of 12 =

d) $\frac{7}{10}$ of 80 cm =

b) $\frac{3}{4}$ of £20 =

e) $\frac{11}{12}$ of 60 =

c) $\frac{3}{5}$ of 35 m =

f) $\frac{6}{7}$ of 84 kg =

3 Calculate the missing values.

200

a) $\frac{3}{5}$ of 200 =

140 litres

b) $\frac{2}{7}$ of 140 litres =

£1,800

c) $\frac{4}{9}$ of £1,800 =

990

d) $\frac{3}{11}$ of 990 =

4 a) In a school of 480 pupils, $\frac{2}{3}$ are juniors.

How many juniors are in the school?

b) A factory makes 256 cars.

$\frac{3}{8}$ are electric cars.

How many electric cars does the factory make?

c) Brett uses $\frac{2}{5}$ of his £180 savings to buy a train ticket.

How much of his savings does he have left?

5

Alex has 288 m of fence to paint.

She paints $\frac{3}{12}$ of the whole fence on Monday. She then paints $\frac{1}{2}$ of what is left on Tuesday.

How much fence does she have left to paint?

6 Fill in the missing numbers.
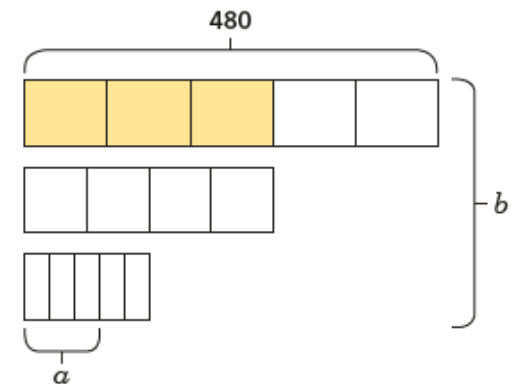
a) $\frac{\square}{10}$ of $500 = $150

c) $42 = \frac{\square}{100}$ of 700

b) $\frac{\square}{4}$ of 100 kg = 75 kg

d) $450 = \frac{\square}{20}$ of 3,000

7 Find the values of a and b.

$a =$ ☐ $b =$ ☐

Friday

Note to Parents:

The Friday Challenge will be made available on the White Rose Year 6 Home Learning page closer the time. 😋