Home Learning MATHS week 7

Monday – Week 4 summer term lesson 1

Tuesday – Week 4 summer term Lesson 2

Wednesday – Week 4 summer term lesson 3

Thursday – Week 4 summer term lesson 4

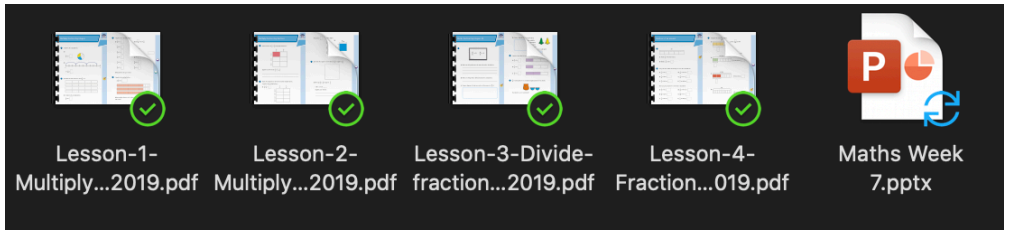
Friday – Fraction quiz

You will need to use this link to access the videos

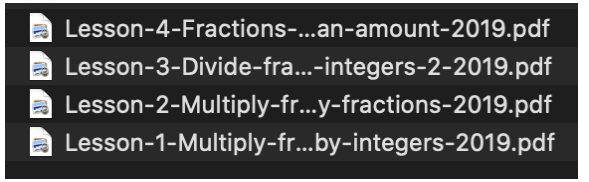
https://whiterosemaths.com/homelearning/year-6/

Home Learning MATHS week 7

This week, you will not be able to access the worksheets online.



I have included them as a PDF file and are accessible through the school website.



You will need to use this link to access the videos

https://whiterosemaths.com/homelearning/year-6/

Lesson 1 - Monday

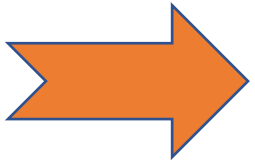
LO: Multiplying fractions by integers

Instructions

Watch the video and listen carefully to the information.

Complete the activities on the next two slides.

After that, have a go at the additional activities and write the answers for these ones in your workbook.

You will need to use this link to access the videos  https://whiterosemaths.com/homelearning/year-6/

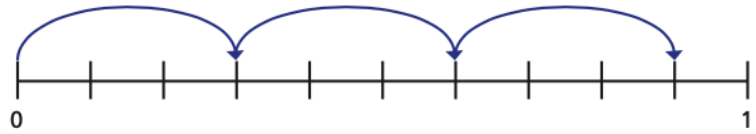
Multiply fractions by integers

1 Complete the calculations.

a)

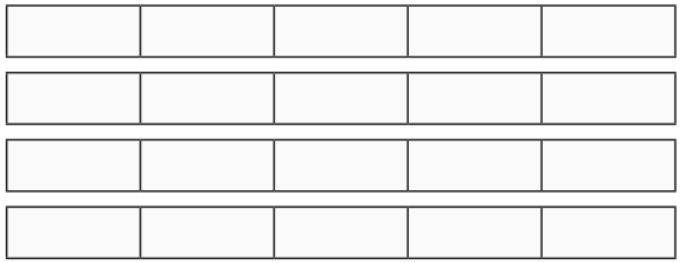
$\frac{2}{7} \times 2 =$ ☐

b)



$3 \times \frac{3}{10} =$ ☐

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



b) Complete the multiplication.

$\frac{2}{5} \times 4 =$ ☐

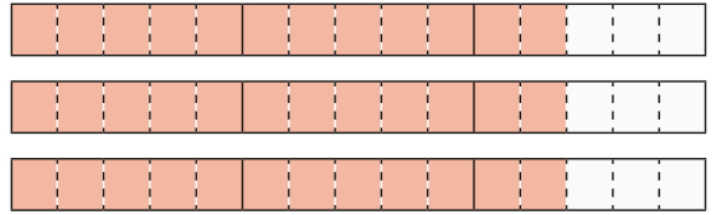
3 Complete the calculations.

a) $\frac{1}{3} \times 1 =$ ☐	**b)** $\frac{3}{4} \times 1 =$ ☐
$\frac{1}{3} \times 2 =$ ☐	$\frac{3}{4} \times 2 =$ ☐
$\frac{1}{3} \times 3 =$ ☐	$\frac{3}{4} \times 3 =$ ☐
$\frac{1}{3} \times 4 =$ ☐	$\frac{3}{4} \times 4 =$ ☐
$\frac{1}{3} \times 5 =$ ☐	$\frac{3}{4} \times 5 =$ ☐
$\frac{1}{3} \times 6 =$ ☐	$\frac{3}{4} \times 6 =$ ☐

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) $1\frac{1}{5} \times 2 =$ ☐

b) $2\frac{1}{6} \times 3 =$ ☐

c) $2\frac{2}{5} \times 4 =$ ☐

d) $2\frac{2}{5} \times 5 =$ ☐

e) $7 \times 3\frac{1}{2} =$ ☐

f) $\frac{11}{15} \times 7 =$ ☐

7 Fill in the missing numbers.

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

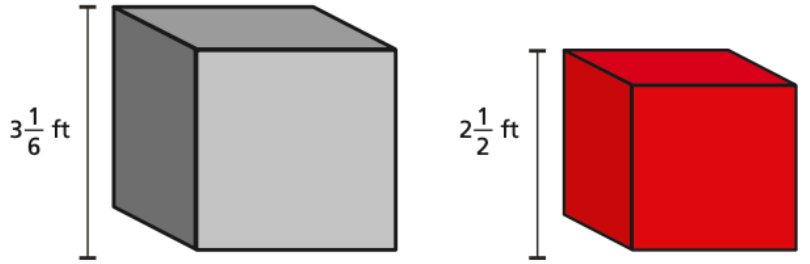
b) $2\frac{\square}{8} \times 3 = 7\frac{1}{2}$

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

How many tins does she eat in a year?

☐

9



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?

TASK

There are 9 lamp posts on a road. There is $4\frac{3}{8}$ of a metre between each lamp post.

What is the distance between the first and last lamp post?

Use pattern blocks, if is equal to 1 whole, work out what fraction the other shapes represent.
Use this to calculate the multiplications.
Give your answers in their simplest form.

× 5 =

× 5 =

× 5 =

Eva and Amir both work on a homework project.

Eva

I spent $4\frac{1}{4}$ hours a week for 4 weeks doing my project.

I spent $2\frac{3}{4}$ hours a week for 5 weeks doing my project.

Amir

Who spent the most time on their project?

Explain your reasoning.

Lesson 2 - Tuesday

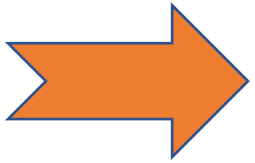
LO: multiplying fractions by fractions

Instructions

Watch the video and listen carefully to the information.

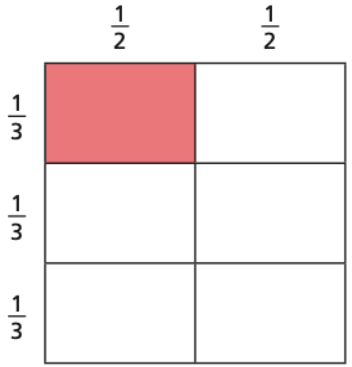
Complete the activities on the next two slides.

After that, have a go at the additional activities and write the answers for these ones in your workbook.

You will need to use this link to access the videos  https://whiterosemaths.com/homelearning/year-6/

Multiply fractions by fractions

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

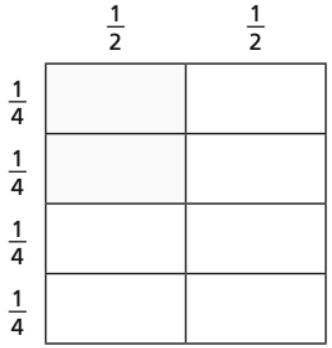


Explain how this shows $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

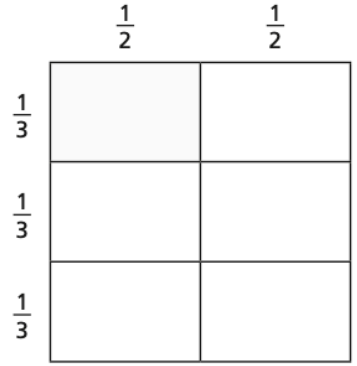
2 Shade the diagrams to show the fraction multiplications.

Complete the multiplications.

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



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



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? _____

Explain your answer.

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4 Complete the calculations.

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

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

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

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

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

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

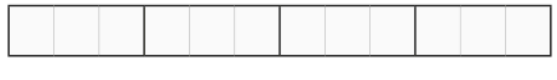
g) $\frac{5}{7} \times \frac{5}{8} = \square$

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

5 Use the diagram to complete the calculations.

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

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



c) What do you notice about your answers?

Talk to your partner.

6 Fill in the missing numbers.

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

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

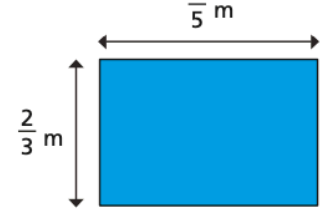
7 Fill in the missing numbers.

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

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

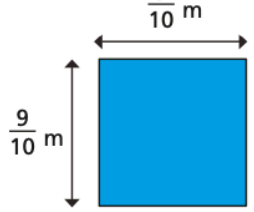
8 Calculate the area of the shapes.

a)



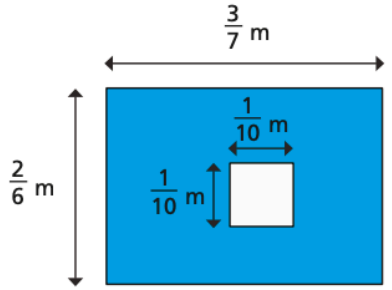
Area = $\square$ m^2

b)



Area = $\square$ m^2

9 Work out the area of the shaded part.



$\square$

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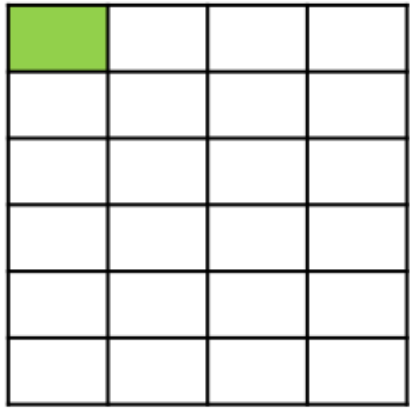
TASK

The shaded square in the grid below is the answer to a multiplying fractions question.

What was the question?



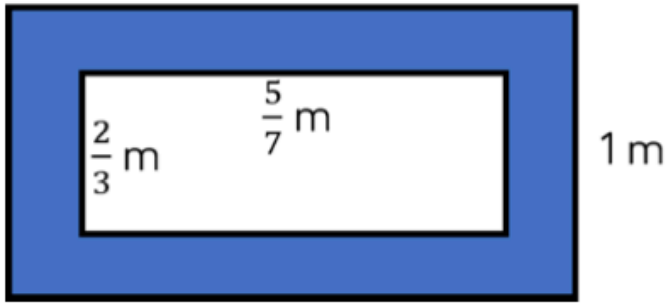
How many ways can you complete the missing digits?

$$\frac{\square}{\square} \times \frac{3}{\square} = \frac{6}{12}$$

$$\times \quad = \frac{\square}{2}$$

Find the area of the shaded part of the shape.

Not drawn accurately



Alex says,

$\frac{1}{4} \times \frac{1}{2}$ is the same as $\frac{1}{2}$ of a quarter.

Do you agree?

Explain why.

Lesson 3 - Wednesday

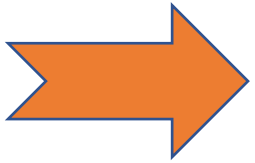
LO: divide fractions by intergerns

Instructions

Watch the video and listen carefully to the information.

Complete the activities on the next two slides.

After that, have a go at the additional activities and write the answers for these ones in your workbook.

You will need to use this link to access the videos  https://whiterosemaths.com/homelearning/year-6/

Divide fractions by integers (2)

1

$\frac{4}{5} \div 2$ $\frac{4}{5} \div 3$

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

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

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

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

How much rice is in each bowl?

4 Work out the divisions.

a) $\frac{1}{5} \div 7 = \square$

b) $\square = \frac{1}{6} \div 3$

c) $\frac{1}{4} \div 9 = \square$

d) $\square = \frac{1}{7} \div 6$

e) $\frac{4}{9} \div 7 = \square$

f) $\square = \frac{5}{6} \div 12$

g) $\frac{8}{3} \div 7 = \square$

h) $\square = \frac{19}{20} \div 5$

i) $\frac{1}{100} \div 25 = \square$

j) $\square = \frac{45}{50} \div 20$

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

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

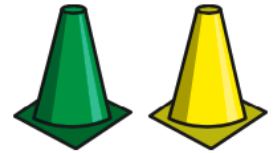
b) $\frac{1}{3} \div 3 \bigcirc \frac{1}{5} \div 5$

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

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.

$\frac{1}{2} \div 2$ *is equal to* $\frac{1}{2} \times \frac{1}{2}$ ☐

$\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4}$ ☐

$\frac{1}{2} \div 3 = \frac{1}{2} \times \frac{1}{3}$ ☐

$\frac{1}{2} \div 5 = \frac{1}{2} \times \frac{1}{5}$ ☐

b) What do you notice?

Is it only true for halves?

Does it work for non-unit fractions?

Talk to a partner.

TASK

Tommy says,

Dividing by 2 is the same as finding half of a number so $\frac{4}{11} \div 2$ is the same as $\frac{1}{2} \times \frac{4}{11}$

Do you agree?
Explain why.

Match the equivalent calculations.

$\frac{1}{4} \times \frac{12}{13}$	$\frac{12}{13} \div 2$
$\frac{1}{6} \times \frac{12}{13}$	$\frac{12}{13} \div 6$
$\frac{1}{2} \times \frac{12}{13}$	$\frac{12}{13} \div 4$
$\frac{1}{3} \times \frac{12}{13}$	$\frac{12}{13} \div 3$

Complete the missing integers.

$\frac{15}{16} \div \square = \frac{5}{16}$

$\frac{15}{16} \div \square = \frac{3}{16}$

$\frac{20}{23} \div \square = \frac{4}{23}$

$\frac{20}{23} \div \square = \frac{5}{23}$

Rosie walks for $\frac{3}{4}$ of an hour over 3 days.
She walks for the same amount of time each day.
How many minutes does Rosie walk each day?

Lesson 4 - Thursday

LO: fractions of amount

Instructions

Watch the video and listen carefully to the information.

Complete the activities on the next two slides.

After that, have a go at the additional activities and write the answers for these ones in your workbook.

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Fractions of an amount

1

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 = ☐

b) $\frac{1}{4}$ of £20 = ☐

c) $\frac{1}{5}$ of 35 m = ☐

d) $\frac{1}{10}$ of 80 cm = ☐

e) $\frac{1}{12}$ of 60 = ☐

f) $\frac{1}{7}$ of 84 kg = ☐

Now use your answers to solve these calculations.

a) $\frac{2}{3}$ of 12 = ☐

b) $\frac{3}{4}$ of £20 = ☐

c) $\frac{3}{5}$ of 35 m = ☐

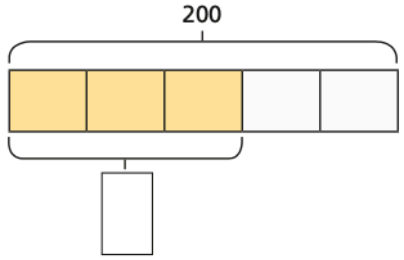
d) $\frac{7}{10}$ of 80 cm = ☐

e) $\frac{11}{12}$ of 60 = ☐

f) $\frac{6}{7}$ of 84 kg = ☐

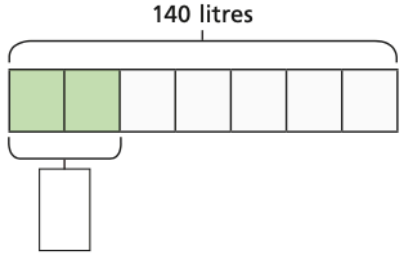
3 Calculate the missing values.

a)



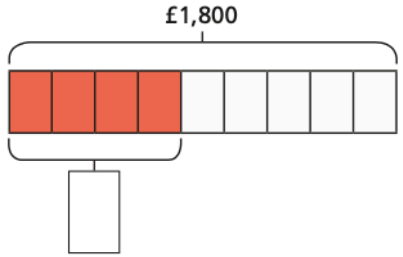
$\frac{3}{5}$ of 200 = ☐

b)



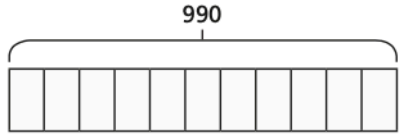
$\frac{2}{7}$ of 140 litres = ☐

c)



$\frac{4}{9}$ of £1,800 = ☐

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.

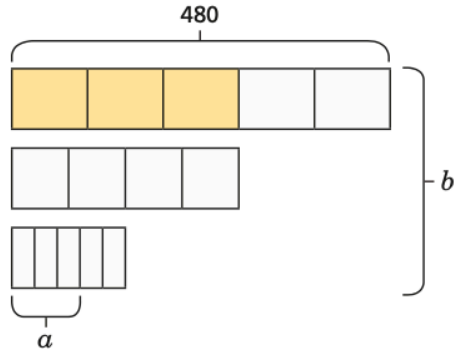
a) $\frac{\square}{10}$ of \$500 = \$150

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

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

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

7 Find the values of a and b.



a = ☐ b = ☐

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TASK

Two fashion designers receive $\frac{3}{8}$ of 208 metres of material.

One of them says:

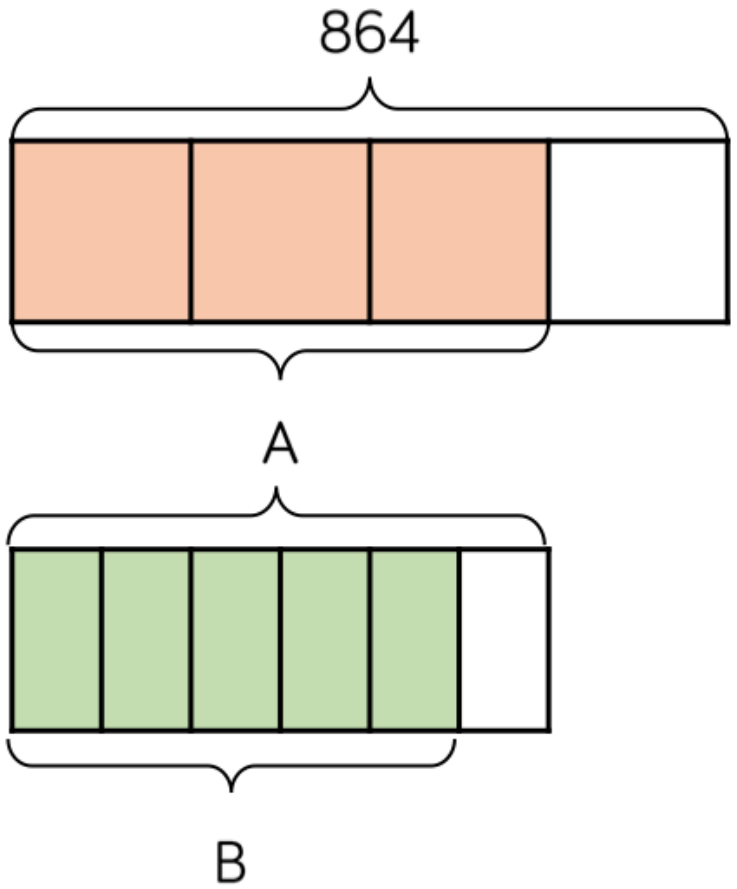
Is she correct?
Explain your reasoning.

Calculate the missing digits.

$\frac{3}{8}$ of 40 = $\frac{?}{10}$ of 150

$\frac{1}{5}$ of 315 = $\frac{?}{8}$ of 72

What is the value of A?
What is the value of B?



Lesson 5 - Friday

Fraction Quiz

Instructions

Here are some reasoning questions that require you to use what you have learnt this week.

Have a go and write the answers in your workbook.

TASK

Add two sets of brackets to make the following calculation correct:

$$\frac{1}{2} + \frac{1}{4} \times 8 + \frac{1}{6} \div 3 = 6\frac{1}{18}$$

Explain where the brackets go and why.
Did you find any difficulties?

TASK

Match each calculation to the correct answer.

$(\frac{2}{3}+\frac{2}{9})\div 4$	$\frac{5}{9}$
$\frac{2}{3}-\frac{1}{3}\div 3$	$\frac{2}{9}$
$\frac{1}{3}\times 2-(1\frac{1}{9}\div 2)$	$\frac{1}{9}$

TASK

Alex says,

I can only divide a fraction by an integer if the numerator is a multiple of the divisor.

Do you agree?
Explain why.

TASK

Calculate the missing fractions and integers.

$$\square \div 4 = \frac{7}{36}$$

$$\frac{3}{20} \div \square = \frac{3}{80}$$

$$\square \div \square = \frac{2}{5}$$

Is there more than one possibility?

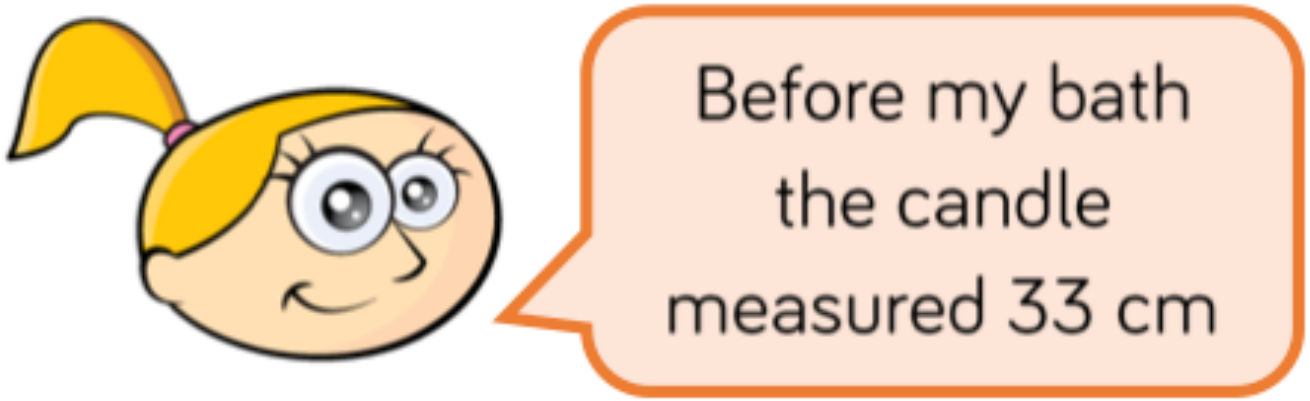
TASK

Eva lit a candle while she had a bath.

After her bath, $\frac{2}{5}$ of the candle was left.

It measured 13 cm.

Eva says:

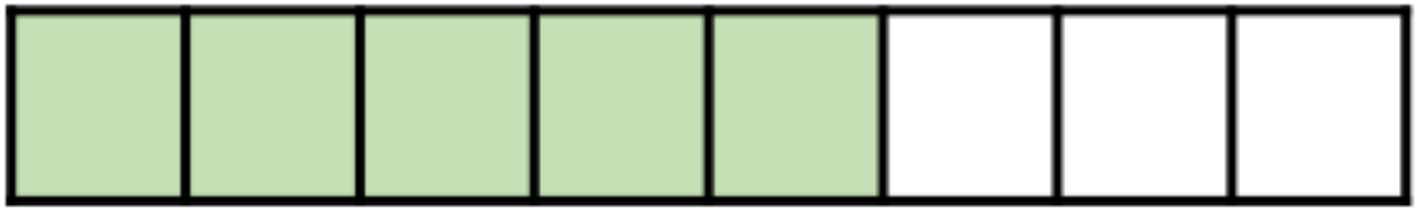


Is she correct?

Explain your reasoning.

TASK

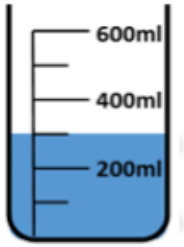
Write a problem which this bar model could represent.

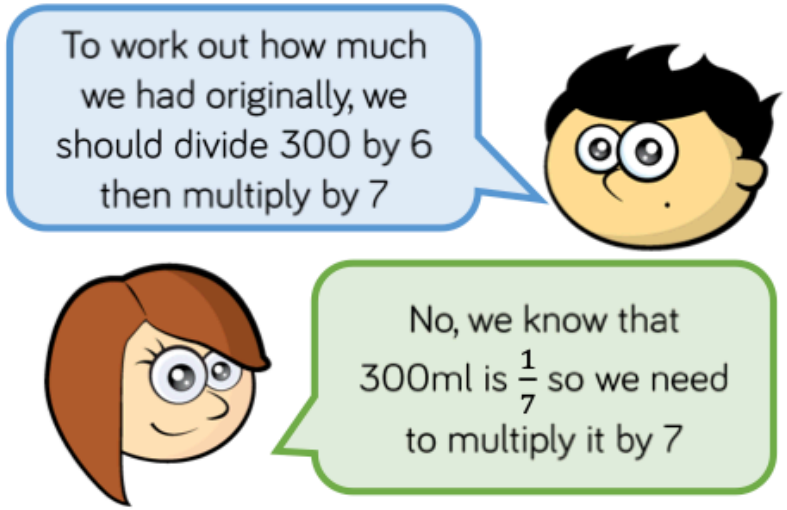


TASK

Rosie and Jack are making juice.

They use $\frac{6}{7}$ of the water in a jug and are left with this amount of water:





Who is correct?

Explain your reasoning.