

Home Learning: Year 3 Maths

We have set out each week's learning as a series of suggested daily activities. However, the time may look very different for each family. Building in time to look after each other, be physical, creative and relax is as important as completing the set activities. You need to decide what works for you and your family. You could do more of the activities on one day and fewer on another, or you may find it helpful to have a more structured approach. It may help to give clear times for doing activities and clear times for breaks. You will also notice that some of the science, history and DT activities are the same and therefore can be done as a family.

Year 3	Day 1	Day 2	Day 3	Day 4	Day 5
Factual Fluency	https://uk.ixl.com/maths/year-3/identify-unit-fractions-on-number-lines	https://uk.ixl.com/maths/year-3/identify-fractions-on-number-lines	https://uk.ixl.com/maths/year-3/understand-fractions-fraction-bars	https://uk.ixl.com/maths/year-3/show-fractions-fraction-bars	https://uk.ixl.com/maths/year-3/division-facts-for-2-5-10-true-or-false
Four Days of Reasoning (Monday-Thursday)	Summer Term Week8 (Wk commencing 15 th /6) https://whiterosemaths.com/homelearning/year-3/ Worksheets (and answers) for each lesson can be found below.	Click onto the link each day. There is a video to watch for each day and then activities to complete. White Rose is an excellent resource and one often used by teachers in our schools. As you support your child, you will see that it presents concepts clearly and incrementally. The lessons will start very simply – however, we do not recommend that you race ahead; spend time on the straightforward before moving onto more complex, abstract ideas. If you feel your child needs greater challenge click onto this link https://whiterosemaths.com/homelearning/year-4/ If your child struggles with maths, they could work on the learning set for year groups lower down the school.			
Friday	On Friday you can revise any part of the week's learning that you found difficult. You can simply repeat one of the lessons if you like. You can also practise times tables.				

Home Learning: Year 3 English

Y3	Day 1	Day 2	Day 3	Day 4	Day 5
Reading	Make sure you have some quiet time for daily reading of your own book. Record your reading in your Reading Record as you normally do. Check out https://www.ccht.rbkc.sch.uk/learning-at-home/story-time/ for some on-line stories and some good book recommendations.				
Writing	<p>LO: Retrieve information from a text. Read the information text about the poet Benjamin Zephaniah. Answer the questions about his life in your book (not on the worksheet)</p>	<p>LO: to think about performance poetry. This week we are going to be thinking about performance poetry. What does this the idea of performance poetry mean to you? Have you ever heard of it before? Think about what the word ‘performance’ means? In your book jot down a few adjectives that you would use to describe a good performance (on the TV, on stage, on a sports field). Now you are going to watch some poets performing their poems. Click on the links below. Video1 Video2 Is there anything that either poet could have done to improve their performance? Now read the poem Louder by Roger Stevens see below). Who are the two speakers? What do you notice about the sizing of the print? What punctuation do you notice? Why is it used? What are the clues that tell you how the teacher is feeling? How is Andrew feeling by the last line? Challenge: Ask someone in your household to perform the poem with you. Extra Dojo points for uploading a recording to ClassDojo. For a comparison watch video3</p>	<p>LO: to identify rhythm in a poem Read Fruit Picking by Jack Ousbey. This poem has a very definite rhythm. Poems are sometimes a bit like songs with a rhythm that carries you along. Read the lines of the poem, tapping out the beat like the sound of a drum – you can do this using one one finger on your other hand. Task Invite others in your household to join you in a musical accompaniment to the poem. Try to collect a range of percussion instruments, saucepan, wooden spoons, metal spoons, you may even have some proper instruments. etc. Spend some time experimenting to try out ideas for steady beats. You can also click fingers, clap, slap knees etc. Then give a verse of the poem to each group member to learn and arrange using instruments, perhaps something different for each line. Don’t worry if you can’t get any help – you can also go solo!</p>	<p>LO: Compose a poem with a refrain Watch this video The children are performing their own version of a poem called No word of a Lie by Jackie Kay. You will notice that this poem uses a lot of repetition.- this is called a refrain or chorus What is the repeated line in the poem? Why do you think the poet has chosen to repeat the line? What possible untruths might you use in the poem. Jot your ideas down. Task Change the statements from ‘No Word of a Lie’ to create your own poem. There are some ideas and a template below to help inspire you. Your teacher would love to see you performing your poem on ClassDojo.</p>	<p>LO: Learn spellings Learn the new set of spellings you have been set by Ms Ross (see below). Use a strategy that suits you. There are some ideas below. You do NOT necessarily need to print out this sheet and fill it in. (If you do, please remember to CHECK as you go along and ask an adult to check all spellings are correct by the time you reach the 3rd column.) You will have another lesson in a week’s time when you will be asked to get someone to test you on the words. You will also be able to work on the words some more in that lesson if you need more time.</p>

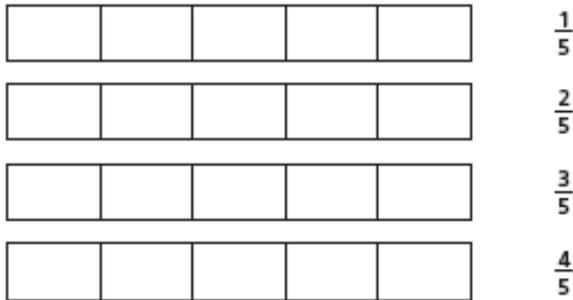
Home Learning: Year 3 Curriculum

Day 1	Day 2	Day 3	Day 4	Day 5
Geography	Science	History	RE	Art/Spanish
<p>LO: Investigate how is wind created</p> <p>What instruments do we use to measure the weather?</p> <p>How do we measure wind?</p> <ul style="list-style-type: none"> • Watch and make notes on this video • Draw a diagram to explain how wind is created (see diagram below) 	<p>LO: To understand the function of stem</p> <p><i>You will need: your diagram of a flowering plant from last lesson</i></p> <p>Can you label the stem in the previous lesson's drawing?</p> <ul style="list-style-type: none"> • What do you think the function of a stem is? <p>Watch this video.</p> <ul style="list-style-type: none"> • Look at the before and after photos of celery being put into dye in the support materials below. What happened? Challenge: Why is the level of the water lower? 	<p>LO: understand the impact of the Iron Age</p> <ul style="list-style-type: none"> • Make notes on the strengths of iron as a material and the changes in life you can see in this video and here https://www.dkfindout.com/uk/history/iron-age/ • Create a poster to explain to someone in your house the impact of the discovery of iron and how it changed life for humanity 	<p>LO: What do the Miracles of Jesus teach us?</p> <p>Read the Bible story below about how Jesus heals the Roman Centurion's Servant. Think about what this miracle shows about the character of Jesus. Then answer the questions in your books.</p>	<p>Spanish Look at this video about toys! https://www.youtube.com/watch?v=pE8T9d7IZI4 Imagine you have to make a birthday list. Write down at least 5 things that you would like to get!</p> <p>Art: Colour and Line drawings (see resources below)</p> <p><i>You will need: Paper, pencil, Colouring materials (pencils, chalk, felt tips paint etc.) Small objects to draw</i></p> <ul style="list-style-type: none"> • Arrange a group of small objects together on a flat surface. • Pick one of the objects. Put down a block of colour on your paper, using your chosen colouring material, in the shape inspired by your objects. When you are happy with your coloured shape create a line drawing of your object, using pencil on top of your colour. Take your time – look for the little details.
Everything is Interesting – Are you ready for a challenge?				

Order fractions



1 a) Shade the bar models to represent the fractions.



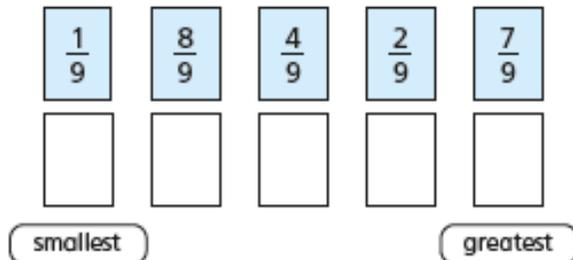
b) What do you notice?

c) Complete the sentence.

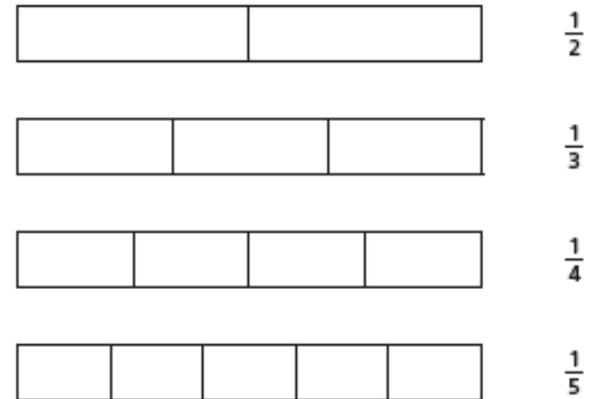
numerator denominator greater smaller

When fractions have the same _____, the _____ the _____ the _____ the fraction.

2 Write the fractions in order, starting with the smallest.



3 a) Shade the bar models to represent the fractions.



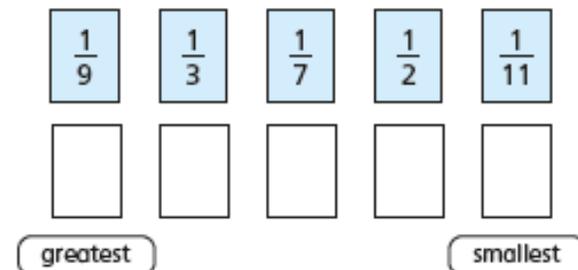
b) What do you notice?

c) Complete the sentence.

numerator denominator greater smaller

When fractions have the same _____, the _____ the _____ the _____ the fraction.

4 Write the fractions in order, starting with the greatest.





5 Tommy and Dora are ordering fractions.

$$\frac{1}{5} \quad \frac{4}{15} \quad \frac{2}{3} \quad \frac{7}{15}$$



Tommy

I cannot order these fractions because the numerators and denominators are different.

I think I can use equivalent fractions to help me.



Dora

Who do you agree with? _____

Talk about it with a partner.

6 a) Complete the equivalent fractions.

$$\frac{3}{5} = \frac{6}{\square} \quad \frac{2}{9} = \frac{6}{\square} \quad \frac{1}{7} = \frac{6}{\square}$$

b) Write the fractions in order, starting with the greatest.

$\frac{6}{9}$	$\frac{3}{5}$	$\frac{1}{7}$	$\frac{2}{9}$
\square	\square	\square	\square

greatest

smallest



7 Dexter and Alex are ordering fractions from smallest to greatest.

$$\frac{1}{7} \quad \frac{2}{21} \quad \frac{4}{35} \quad \frac{2}{7}$$

a)



Dexter

I am going to make the numerators the same.

Use Dexter's method to put the fractions in order.

b)

I am going to make the denominators the same.



Alex

Use Alex's method to put the fractions in order.

c) Which method do you prefer? Talk about it with a partner.



Add fractions



1 Complete the additions.

Use the bar models to help you.

a)  $\frac{1}{3} + \frac{1}{3} = \square$

b)  $\frac{1}{5} + \frac{1}{5} = \square$

c)  $\frac{1}{5} + \frac{2}{5} = \square$

d)  $\frac{1}{5} + \frac{3}{5} = \square$

2 Shade the circles and complete the additions.



$\frac{1}{8} + \frac{3}{8} = \square$



$\frac{5}{8} + \frac{1}{8} = \square$

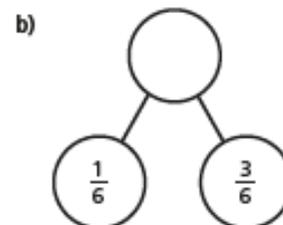
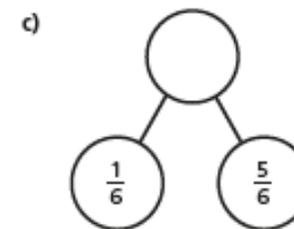
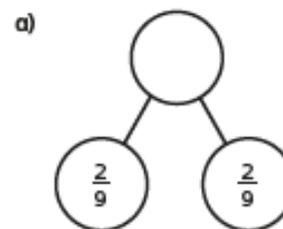


$\frac{3}{8} + \frac{3}{8} = \square$



$\frac{5}{8} + \frac{3}{8} = \square$

3 Complete the part-whole models.



Which part-whole model is the odd one out? _____

Talk about your choice with a partner. Did they choose the same odd one out?



- 4 Alex and Huan are eating a cake.
 Alex eats $\frac{4}{7}$ of the cake.
 Huan eats $\frac{2}{7}$ of the cake.
 What fraction of the cake have they eaten altogether?

They have eaten of the cake altogether.

- 5 Teddy is adding fractions.



$\frac{1}{4} + \frac{2}{4} = \frac{3}{8}$

- a) Draw a bar model to show that Teddy is wrong.

- b) Complete the addition $\frac{1}{4} + \frac{2}{4} =$



- 6 Annie has baked 12 muffins.



She puts them into 2 boxes.

What fraction of the muffins could she put in each box?

Complete the table to show different possibilities.

One has been done for you.

Box 1	Box 2
$\frac{1}{12}$	$\frac{11}{12}$

Are there any other possibilities? Talk about it with a partner.

- 7 Complete the additions.

a) $\frac{3}{8} + \frac{4}{8} =$

d) $\frac{3}{103} + \frac{4}{103} =$

b) $\frac{3}{9} + \frac{4}{9} =$

e) $\frac{5}{31} + \frac{9}{31} =$

c) $\frac{3}{29} + \frac{4}{29} =$

f) $\frac{17}{111} + \frac{33}{111} =$



Subtract fractions

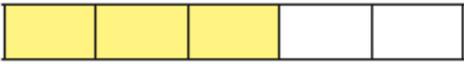


1 Complete the subtractions.

Use the bar models to help you.

a)  $\frac{2}{3} - \frac{1}{3} = \square$

b)  $\frac{2}{5} - \frac{1}{5} = \square$

c)  $\frac{3}{5} - \frac{1}{5} = \square$

d)  $\frac{4}{5} - \frac{1}{5} = \square$

2 Jack has $\frac{7}{8}$ of a chocolate bar.

He eats $\frac{4}{8}$ of the chocolate bar.

What fraction of the chocolate bar does he have left?

Jack has of the chocolate bar left.



3 Complete the subtractions.

Simplify your answers where possible.

a) $\frac{7}{10} - \frac{1}{10} = \square = \square$

e) $\frac{8}{12} - \frac{4}{12} = \square = \square$

b) $\frac{7}{10} - \frac{2}{10} = \square = \square$

f) $\frac{9}{12} - \frac{5}{12} = \square = \square$

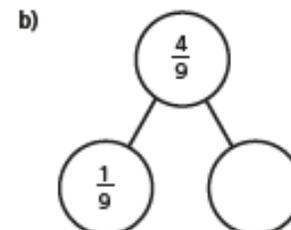
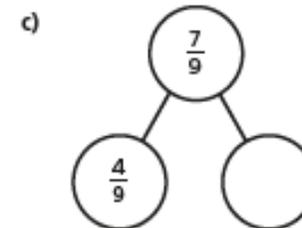
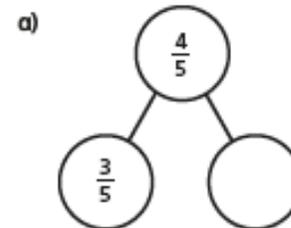
c) $\frac{7}{10} - \frac{3}{10} = \square = \square$

g) $\frac{9}{59} - \frac{5}{59} = \square$

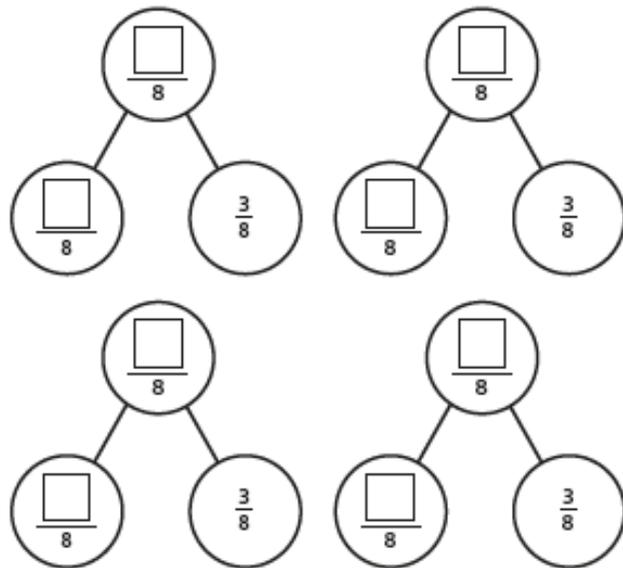
d) $\frac{7}{12} - \frac{3}{12} = \square = \square$

h) $\frac{13}{127} - \frac{9}{127} = \square$

4 Complete the part-whole models.



- 5 Complete the part-whole model in four different ways.



- 6 Kim has read $\frac{6}{7}$ of her book.
Tom has read $\frac{2}{7}$ of his book.

a) Shade the bar models to represent this information.



b) How much more has Kim read than Tom?

Kim has read

--

 more of her book than Tom.

- 7 Write the missing numerators.

a) $\frac{8}{9} - \frac{\square}{9} = \frac{7}{9}$

e) $\frac{7}{10} - \frac{5}{10} = \frac{1}{10} + \frac{\square}{10}$

b) $\frac{5}{11} - \frac{\square}{11} = \frac{4}{11}$

f) $\frac{\square}{4} - \frac{1}{4} = \frac{1}{4} + \frac{1}{4}$

c) $\frac{8}{9} - \frac{\square}{9} = \frac{3}{9} + \frac{4}{9}$

g) $\frac{\square}{5} - \frac{2}{5} = \frac{1}{5} + \frac{2}{5}$

d) $\frac{7}{9} - \frac{5}{9} = \frac{\square}{9} - \frac{4}{9}$

h) $\frac{4}{5} + \frac{1}{5} = \frac{3}{7} - \frac{2}{7} + \frac{\square}{7}$

- 8 Complete the table to show three possible values of the square and triangle.

		$= \frac{13}{92}$
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How many other answers can you find?

Three Cards

The Problem

Here are some fraction cards.



- Each fraction has 7 as the denominator.
- A is twice as big as B.
- The sum of the cards is 1

What could the cards be?

My Solution

A large empty rectangular box with a blue border, intended for the student to write their solution to the problem.

The Symbol

The Problem

The symbol  means

Double the first number and then
subtract the second number

Calculate

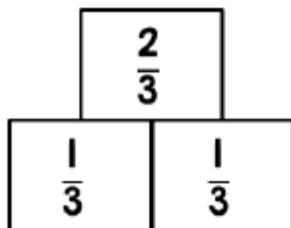
$$\frac{2}{5} \star \frac{3}{5}$$

My Solution

Pyramids 1

The Problem

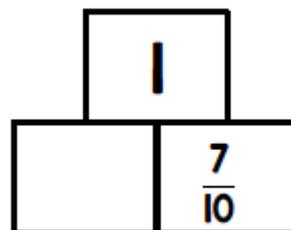
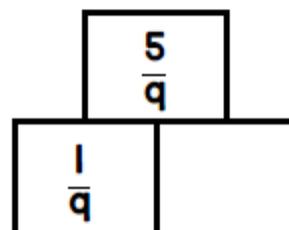
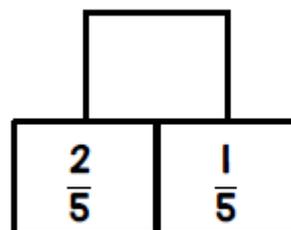
Here is a fraction pyramid.



The number above is calculated by adding the two fractions below.

Work out the missing numbers in the pyramids opposite.

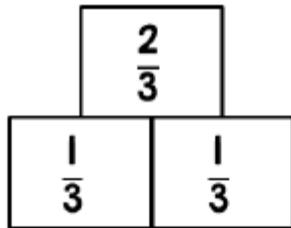
My Solution



Pyramids 2

The Problem

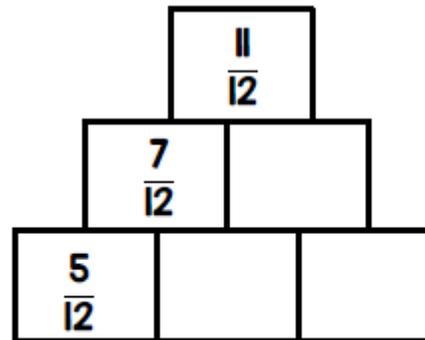
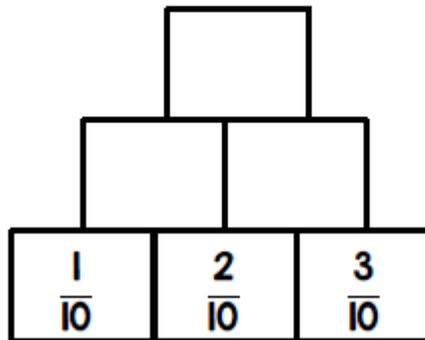
Here is a fraction pyramid.



The number above is calculated by adding the two fractions below.

Work out the missing numbers in the pyramids opposite.

My Solution



Total Length

The Problem

This line is $\frac{3}{20}$ of a metre long.



This line is $\frac{4}{20}$ metre longer than the line above.



What is the total length of the two lines?

Can you write your answer in cm too?

My Solution

Benjamin Zephaniah

Fact File

Full Name: Dr Benjamin Obadiah Iqbal Zephaniah

Date of Birth: 15th April 1958

Place of Birth: Birmingham, England

Famous For: Writing and performing many poems, books, songs and plays.

Benjamin's dad was originally from Barbados and was a postal worker. His mum was originally from Jamaica and worked as a nurse. Benjamin spent a lot of time living in London but he now lives in China.



Poems

Benjamin is famous for his poems and the way that he reads them out. Benjamin performs in a way that is called 'dub poetry'. Dub poets change the speed and sound of their voice so that it sounds like music when they read poems out loud. Benjamin didn't like the idea that poems were only for people who went to school or university. He thought that poems should be for everyone to enjoy. Because of this, he performed his poetry so that everyone could hear and enjoy it.



Causes

Benjamin writes poems about things that he believes in. He has written many poems against racism and slavery. In the early 1980s, he argued against homelessness and other problems that he saw in Britain through his poems. He performed these poems outside police stations and during demonstrations. He also writes lots about the way that we treat animals and he works with lots of groups who help animals.



Books

Benjamin has written many books of poetry for adults and children. He has also written several fiction books for teenagers. His first book of poetry for children was called 'Talking Turkeys' and told people that they should be nice to their turkeys at Christmas. This book was so popular that all of the copies sold out in only six weeks and more had to be printed!



Fun Facts

- In 1991, Benjamin performed his poetry on every continent in only 22 days!
- Benjamin loves to watch football.
- Ealing Hospital in London have named part of their building after Benjamin.



Today

Benjamin is still writing and performing poems today. He spends lots of his time living in China but still travels to lots of different countries. He is still inspiring young writers and singers to create poetry and music about things they believe in.



Questions

1. What is Benjamin Zephaniah famous for? Tick one.

- playing football
- writing and performing poems
- having a pet turkey
- travelling all over the world

2. Number the sub-headings from 1-4 to show the order that they appear in the text.

- Poems
- Fact File
- Causes
- Books

3. Which building has part of it named after Benjamin Zephaniah?

- a football ground
- a swimming pool in Birmingham
- his house in China
- Ealing Hospital in London

4. Draw four lines to complete the sentences.

<input type="text" value="Benjamin enjoys"/>	<input type="text" value="dub poetry."/>
<input type="text" value="Benjamin performs"/>	<input type="text" value="'Talking Turkeys'."/>
<input type="text" value="Benjamin wrote a book called"/>	<input type="text" value="watching football."/>
<input type="text" value="Benjamin now lives in"/>	<input type="text" value="China."/>

5. Look at the section with the sub-heading **Books**.

Why has the author included a picture of a turkey?

6. Who does Benjamin think should be able to enjoy poems?

7. Benjamin writes his poems about topics he has strong beliefs about. If you had to write a poem about something you have strong beliefs about, what would your poem be about?

Explain your answer.

English Day Two

Louder by Roger Stevens

Okay, Andrew, nice and clearly
off you go

Welcome everybody to our school concert...

Louder, please, Andrew. Mums and dads won't hear you at the back, will they?

Welcome everybody to our school concert...

Louder, Andrew. You're not trying.

Pro -
ject -
your -
voice.

Take a b i r g b r e a t h and

louder !

Welcome everybody to our school concert...

For goodness sake, Andrew. LOUDER ! LOUDER !

Welcome everybody to our school concert

Now Andrew, there's no need to be silly

Fruit Picking

by Jack Ousbey



Raspberry, strawberry, gooseberry, plum,
Fruit picking time is really good fun;
Out in the field, in our hats, in the sun,
Raspberry, strawberry, gooseberry, plum.



Gooseberry, strawberry, raspberry, plum,
Carefully picking with finger and thumb;



When the baskets are full our picking is done,
Gooseberry, strawberry, raspberry, plum.



Raspberry, gooseberry, strawberry, plum,
Here is a tune for pickers to hum;
Tap out the beat like the sound of a drum,
Raspberry, gooseberry, strawberry, plum.



Raspberry, strawberry, gooseberry, plum,
Now in our beds when night-time has come
We can think of our wonderful day in the sun,



Raspberry, strawberry, gooseberry, plum.



English Day Four

Write your own version of ***No Word of a Lie***. You can write as many verses as you want to and they can be as fantastic as you want them to be! Please write your poem in your book.

No Word of a Lie

I can _____ and that's no word of a lie

I can _____ and that's no word of a lie

Monday 9th December 2019
NO WORD OF A LIE

I can run the whole world in 1 second and that's
NO WORD OF A LIE.

I can eat a billion big macs' and that's
NO WORD OF A LIE.

I can count to two million in one second and that's
NO WORD OF A LIE.

I can work ~~on~~ all equations in the world and that's
NO WORD OF A LIE.

I can make a website in a second and that's
NO WORD OF A LIE.

I can sail the world in one day and that's
NO WORD OF A LIE.

I can...

Thursday 5th December 2019
NO WORD OF A LIE

I can eat one thousand steaks
in a second and that's
NO WORD OF A LIE.

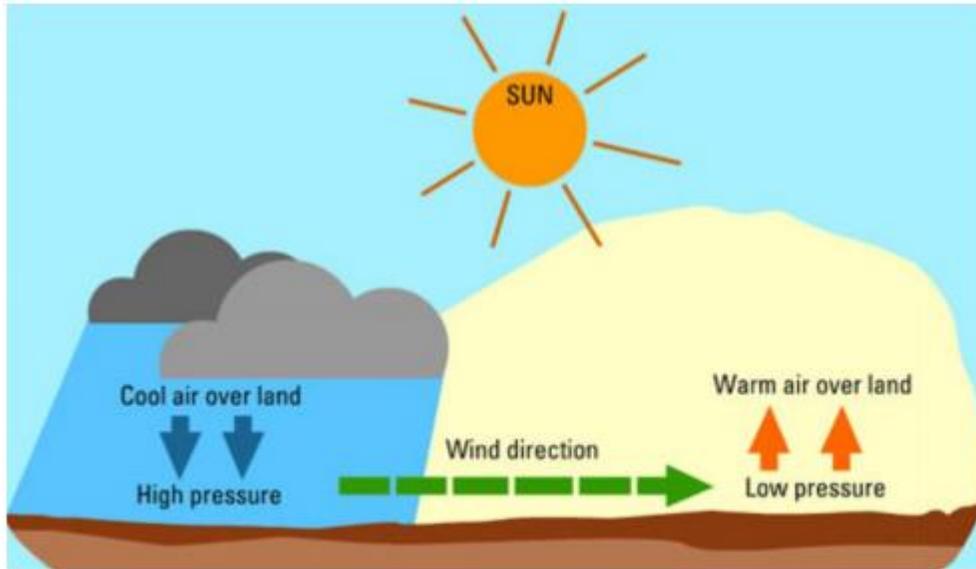
I can tell when someone's going to die
and that's
NO WORD OF A LIE.

I can swim one thousand metres
in one second and that's
NO WORD OF A LIE.

Geography - Support

How is wind created?

- 1) When the sun shines on the land it makes the air above it get warmer.
- 2) When air gets warmer it rises.
- 3) The colder air moves to take the warm air's place.
- 4) The movement of the cold air replacing the warm air that has risen is the wind.



Science Resources

*Photos of celery experiment

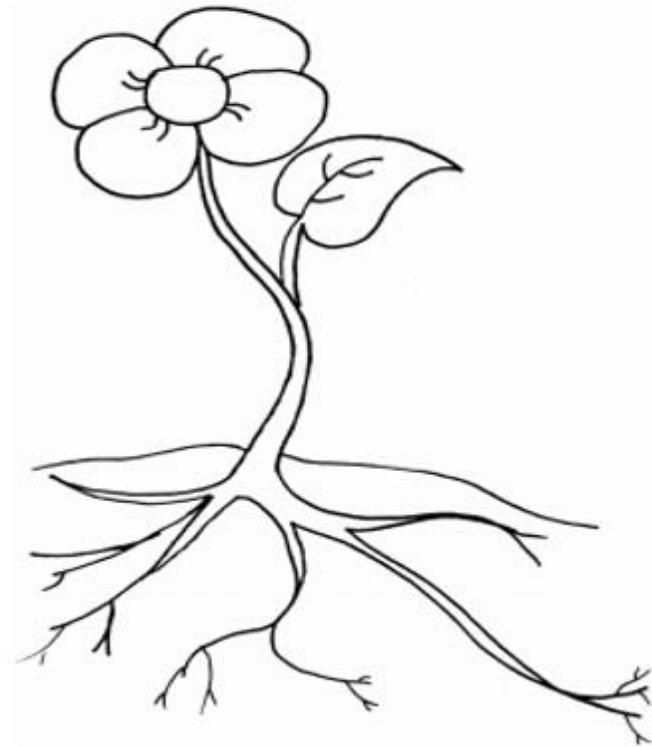


Before



After

Label the parts of a plant
Challenge: What does each part do?



Words to learn for test on Friday 26th May

Green words - everyone must learn to spell these words

Blue words - most people will learn to spell these words too

Red words - some people will also learn these words

	The sound /g/ written as gu and gue and the sound /k/ written as que	1st Attempt	2nd Attempt	3rd Attempt
1	guide			
2	guard			
3	plaque			
4	cheque			
5	mosque			
6	antique			
7	unique			
8	plague			
9	league			
10	tongue			
11	synagogue			
12	catalogue			
13	dialogue			
14	technique			
15	opaque			
Do you know the meaning of these words?				
	opaque			
	unique			

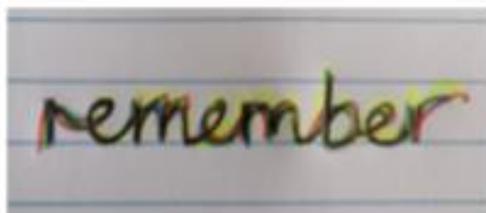
Spelling Strategies

Pyramid Writing

b
be
bec
beca
becau
becaus
because

Rainbow writing

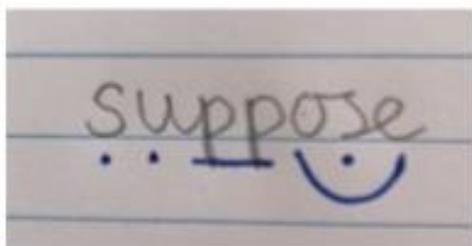
Write the word over and over again using different colours.



Create a mnemonic



Sound Buttons



**Note, this may not work for words you cannot 'sound out'

Underline the tricky part

separate

library

naughty

Look, Say, Cover, Write, Check

Look at the word

Say it out loud

Cover it up

Write it

Check whether it is spelt correctly

Art – Colour and Line drawing

We normally draw a pencil sketch first and then colour it in. However, with this method you reverse the process. It's an effective way to make you think about the overall shape of the object before focusing on the smaller details.

You can use any type of paper for this activity. When you become confident using this technique, why not try using the inside of used cardboard food packing. This can make a great canvas for your artwork.



Roll of Sellotape

Ball of string



Jesus heals the Roman centurion's servant

Jesus went into a city. There was an important man in the army, an officer in charge of 100 men, called a 'centurion'. The centurion had a servant who was very poorly. The servant was in a lot of pain and could not get out of bed.

Some friends of the centurion came to see Jesus.

'Please help', they begged. 'This Roman centurion is a good man. He is kind to us and helps us. Please help him.' Jesus said he would go straight away to see the centurion's servant.

Before he got to the house, the Roman soldier came out to meet Jesus.

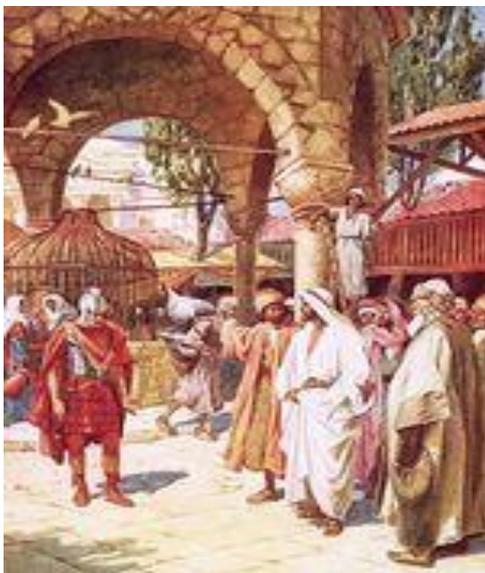
'I'm not good enough for you to come into my house,' he told Jesus. 'Please just give the order and I know my servant will be healed. I know you can do that.'

Jesus was amazed because the army officer had so much faith and trust in him. Jesus said to the army officer, 'Go home. Your servant will be well again.'

At that moment, the servant started to get better. He sat up, got out of bed, and began to move around. It was a miracle!

The servant had been healed because his master had so much faith and kindness.

Based on Luke 7:1-10



Answer the following questions in your books:

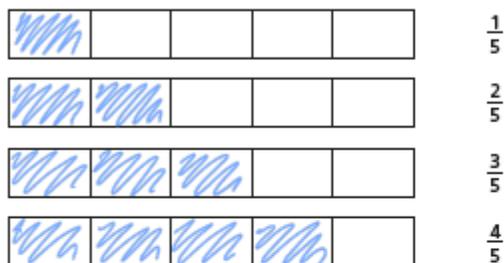
- † What do you think about this miracle of Jesus?
- † What was Jesus showing and teaching by performing this miracle?
- † Why do you think the Centurion said 'Please just give the order and I know my servant will be healed.'
- † What does this miracle tell us about Jesus?

Maths Answers

Order fractions



1 a) Shade the bar models to represent the fractions.



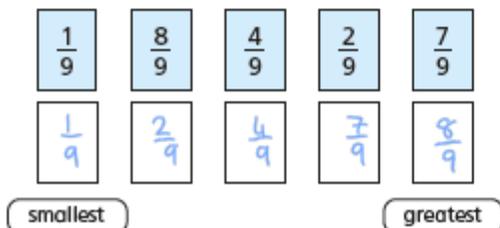
b) What do you notice?

c) Complete the sentence.

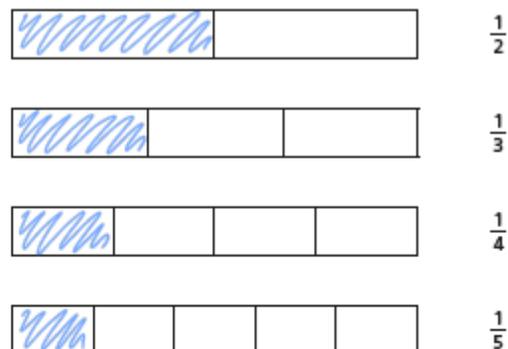
numerator denominator greater smaller

When fractions have the same denominator, the greater the numerator the greater the fraction.

2 Write the fractions in order, starting with the smallest.



3 a) Shade the bar models to represent the fractions.



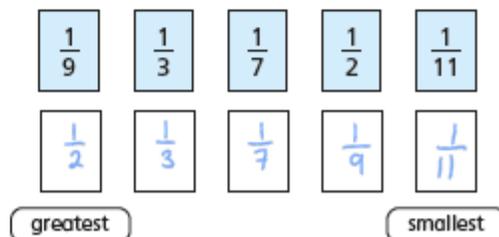
b) What do you notice?

c) Complete the sentence.

numerator denominator greater smaller

When fractions have the same numerator, the greater the denominator the smaller the fraction.

4 Write the fractions in order, starting with the greatest.



- 5 Tommy and Dora are ordering fractions.

$$\frac{1}{5} \quad \frac{4}{15} \quad \frac{2}{3} \quad \frac{7}{15}$$



Tommy

I cannot order these fractions because the numerators and denominators are different.

I think I can use equivalent fractions to help me.



Dora

Who do you agree with? Dora

Talk about it with a partner.

- 6 a) Complete the equivalent fractions.

$$\frac{3}{5} = \frac{6}{10} \quad \frac{2}{9} = \frac{6}{27} \quad \frac{1}{7} = \frac{6}{42}$$

- b) Write the fractions in order, starting with the greatest.

$\frac{6}{9}$	$\frac{3}{5}$	$\frac{1}{7}$	$\frac{2}{9}$
$\frac{6}{9}$	$\frac{3}{5}$	$\frac{2}{9}$	$\frac{1}{7}$

greatest

smallest

- 7 Dexter and Alex are ordering fractions from smallest to greatest.

$$\frac{1}{7} \quad \frac{2}{21} \quad \frac{4}{35} \quad \frac{2}{7}$$

- a)



Dexter

I am going to make the numerators the same.

Use Dexter's method to put the fractions in order.

$$\frac{1}{7} = \frac{4}{28} \quad \frac{2}{21} = \frac{4}{42} \quad \frac{2}{7} = \frac{4}{14}$$

$$\frac{2}{21}, \frac{4}{35}, \frac{1}{7}, \frac{2}{7}$$

- b)

I am going to make the denominators the same.



Alex

Use Alex's method to put the fractions in order.

$$\frac{1}{7} = \frac{15}{105} \quad \frac{2}{21} = \frac{10}{105} \quad \frac{4}{35} = \frac{12}{105} \quad \frac{2}{7} = \frac{30}{105}$$

$$\frac{2}{21}, \frac{4}{35}, \frac{1}{7}, \frac{2}{7}$$

- c) Which method do you prefer? Talk about it with a partner.

Add fractions

1 Complete the additions.

Use the bar models to help you.

a)  $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$

b)  $\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$

c)  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

d)  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$

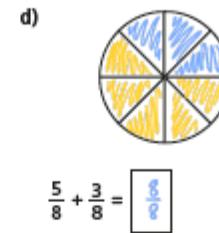
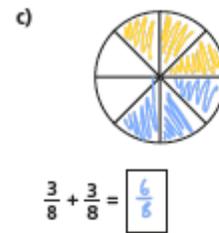
2 Shade the circles and complete the additions.



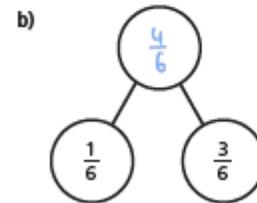
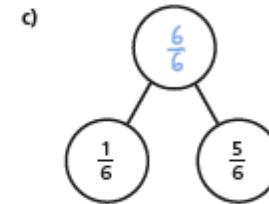
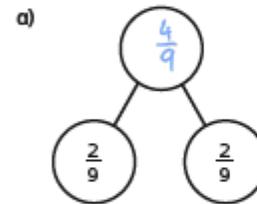
$\frac{1}{8} + \frac{3}{8} = \frac{4}{8}$



$\frac{5}{8} + \frac{1}{8} = \frac{6}{8}$



3 Complete the part-whole models.



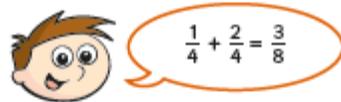
Which part-whole model is the odd one out? various

Talk about your choice with a partner. Did they choose the same odd one out?

- 4 Alex and Huan are eating a cake.
 Alex eats $\frac{4}{7}$ of the cake.
 Huan eats $\frac{2}{7}$ of the cake.
 What fraction of the cake have they eaten altogether?

They have eaten $\frac{6}{7}$ of the cake altogether.

- 5 Teddy is adding fractions.



- a) Draw a bar model to show that Teddy is wrong.

$\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ *not* $\frac{3}{8}$

- b) Complete the addition $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$



- 6 Annie has baked 12 muffins.



She puts them into 2 boxes.

What fraction of the muffins could she put in each box?

Complete the table to show four possibilities.

One has been done for you.

Box 1	Box 2
$\frac{1}{12}$	$\frac{11}{12}$
$\frac{2}{12}$	$\frac{10}{12}$
$\frac{3}{12}$	$\frac{9}{12}$
$\frac{4}{12}$	$\frac{8}{12}$
$\frac{5}{12}$	$\frac{7}{12}$
$\frac{6}{12}$	$\frac{6}{12}$

Are there any other possibilities? Talk about it with a partner.

- 7 Complete the additions.

a) $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$

d) $\frac{3}{103} + \frac{4}{103} = \frac{7}{103}$

b) $\frac{3}{9} + \frac{4}{9} = \frac{7}{9}$

e) $\frac{5}{31} + \frac{9}{31} = \frac{14}{31}$

c) $\frac{3}{29} + \frac{4}{29} = \frac{7}{29}$

f) $\frac{17}{111} + \frac{33}{111} = \frac{50}{111}$



Subtract fractions



1 Complete the subtractions.

Use the bar models to help you.

a)  $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

b)  $\frac{2}{5} - \frac{1}{5} = \frac{1}{5}$

c)  $\frac{3}{5} - \frac{1}{5} = \frac{2}{5}$

d)  $\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$

2 Jack has $\frac{7}{8}$ of a chocolate bar.

He eats $\frac{4}{8}$ of the chocolate bar.

What fraction of the chocolate bar does he have left?

Jack has $\frac{3}{8}$ of the chocolate bar left.



3 Complete the subtractions.

Simplify your answers where possible.

a) $\frac{7}{10} - \frac{1}{10} = \frac{6}{10} = \frac{3}{5}$

e) $\frac{8}{12} - \frac{4}{12} = \frac{4}{12} = \frac{1}{3}$

b) $\frac{7}{10} - \frac{2}{10} = \frac{5}{10} = \frac{1}{2}$

f) $\frac{9}{12} - \frac{5}{12} = \frac{4}{12} = \frac{1}{3}$

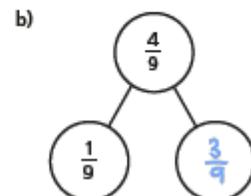
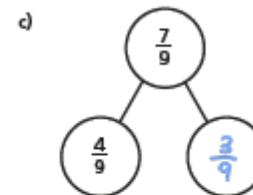
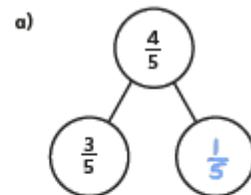
c) $\frac{7}{10} - \frac{3}{10} = \frac{4}{10} = \frac{2}{5}$

g) $\frac{9}{59} - \frac{5}{59} = \frac{4}{59}$

d) $\frac{7}{12} - \frac{3}{12} = \frac{4}{12} = \frac{1}{3}$

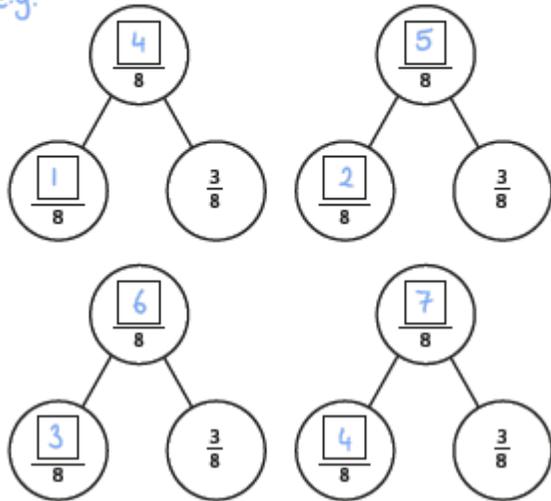
h) $\frac{13}{127} - \frac{9}{127} = \frac{4}{127}$

4 Complete the part-whole models.



- 5 Complete the part-whole model in four different ways.

e.g.



- 6 Kim has read $\frac{6}{7}$ of her book.

Tom has read $\frac{2}{7}$ of his book.

- a) Shade the bar models to represent this information.



- b) How much more has Kim read than Tom?

Kim has read $\frac{4}{7}$ more of her book than Tom.

- 7 Write the missing numerators.

a) $\frac{8}{9} - \frac{1}{9} = \frac{7}{9}$

e) $\frac{7}{10} - \frac{5}{10} = \frac{1}{10} + \frac{1}{10}$

b) $\frac{5}{11} - \frac{1}{11} = \frac{4}{11}$

f) $\frac{3}{4} - \frac{1}{4} = \frac{1}{4} + \frac{1}{4}$

c) $\frac{8}{9} - \frac{1}{9} = \frac{3}{9} + \frac{4}{9}$

g) $\frac{5}{5} - \frac{2}{5} = \frac{1}{5} + \frac{2}{5}$

d) $\frac{7}{9} - \frac{5}{9} = \frac{6}{9} - \frac{4}{9}$

h) $\frac{4}{5} + \frac{1}{5} = \frac{3}{7} - \frac{2}{7} + \frac{6}{7}$

- 8 Complete the table to show three possible values of the square and triangle.

e.g. $\frac{\triangle}{92} - \frac{\square}{92} = \frac{13}{92}$

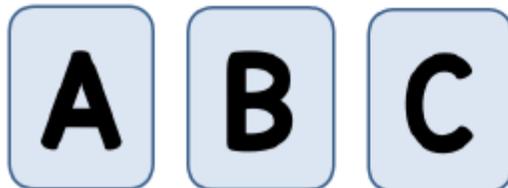
14	1
20	7
30	17

How many other answers can you find?

Three Cards

The Problem

Here are some fraction cards.



- Each fraction has 7 as the denominator.
- A is twice as big as B.
- The sum of the cards is 1

What could the cards be?

My Solution

$$A + B + C = 1$$

$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{3}{7}$$

e.g. $\frac{4}{7} + \frac{2}{7} + \frac{1}{7} = \frac{7}{7}$

so the cards could be ...

$$A = \frac{4}{7} \quad B = \frac{2}{7} \quad C = \frac{1}{7}$$

The Symbol

The Problem

The symbol  means

Double the first number and then subtract the second number

Calculate

$$\frac{2}{5} \star \frac{3}{5}$$

My Solution

Double $\frac{2}{5}$ then subtract $\frac{3}{5}$

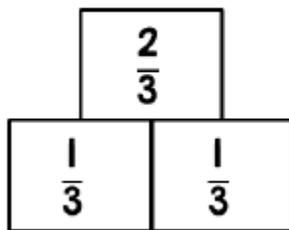
$$\frac{2}{5} + \frac{2}{5} - \frac{3}{5} = \frac{1}{5}$$

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

Pyramids 1

The Problem

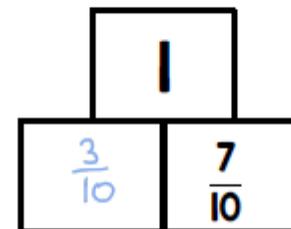
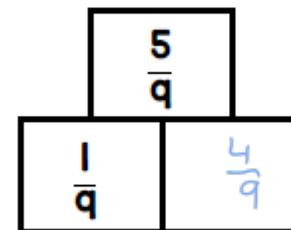
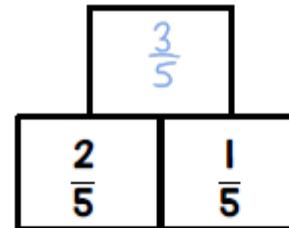
Here is a fraction pyramid.



The number above is calculated by adding the two fractions below.

Work out the missing numbers in the pyramids opposite.

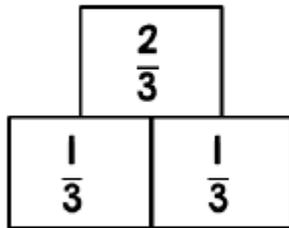
My Solution



Pyramids 2

The Problem

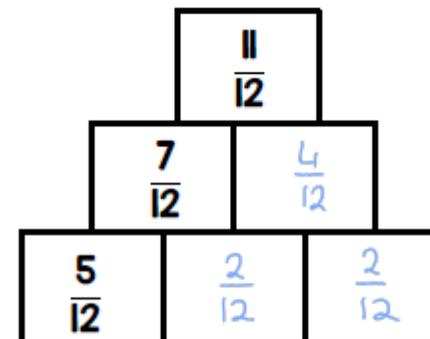
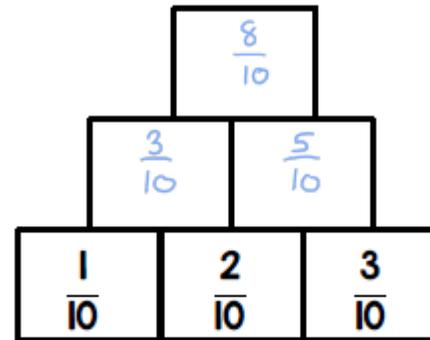
Here is a fraction pyramid.



The number above is calculated by adding the two fractions below.

Work out the missing numbers in the pyramids opposite.

My Solution



Total Length

The Problem

This line is $\frac{3}{20}$ of a metre long.



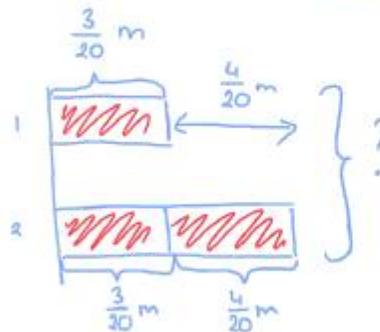
This line is $\frac{4}{20}$ metre longer than the line above.



What is the total length of the two lines?

Can you write your answer in cm too?

My Solution



$$\frac{3}{20} \text{ m} + \frac{3}{20} \text{ m} + \frac{4}{20} \text{ m} = \frac{10}{20} \text{ m}$$

The total length of the two lines is $\frac{10}{20}$ m. This is the same as 50 cm.