Home Learning Pack
Year 6

Thursday 11.11.21

Maths – Fractions

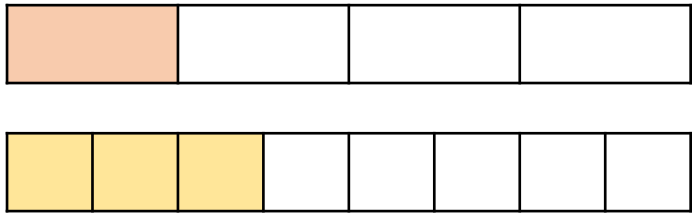
Add and subtract fractions activity

Here is a link with videos to support you with this topic.

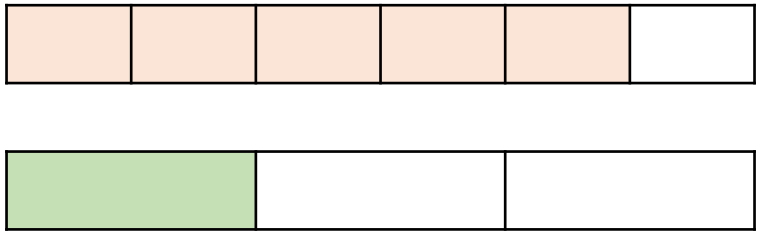
Autumn Week 10 - Number: Fractions | White Rose Maths

Start where you feel comfortable in the math's activities and choose your level of challenge.

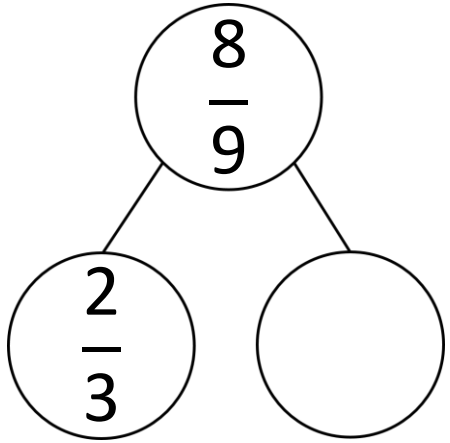
1) $\frac{1}{4} + \frac{3}{8} =$



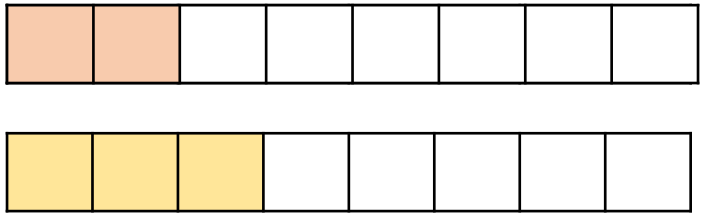
2) $\frac{5}{6} - \frac{1}{3} =$



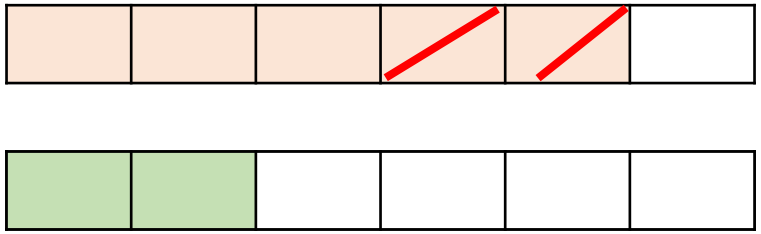
3) Complete the part-whole model:



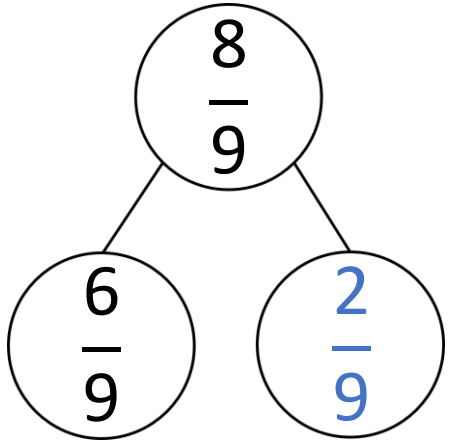
1) $\frac{1}{4} + \frac{3}{8} = \frac{5}{8}$



2) $\frac{5}{6} - \frac{1}{3} = \frac{3}{6}$

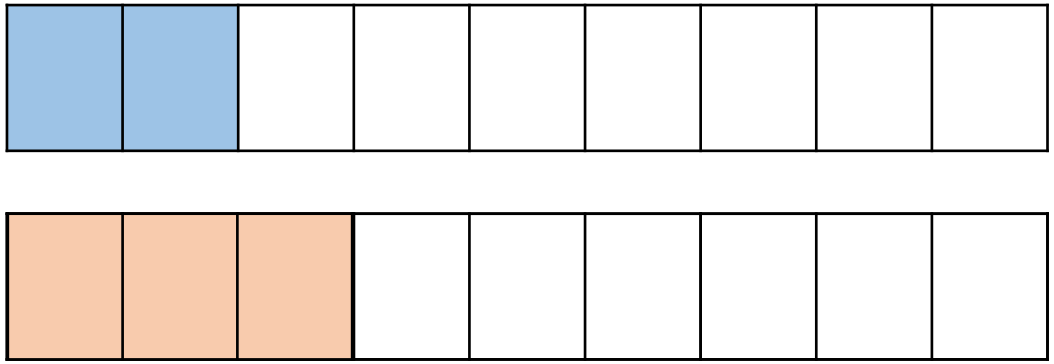


3) Complete the part-whole model:



$$\frac{2}{9} + \frac{1}{3}$$

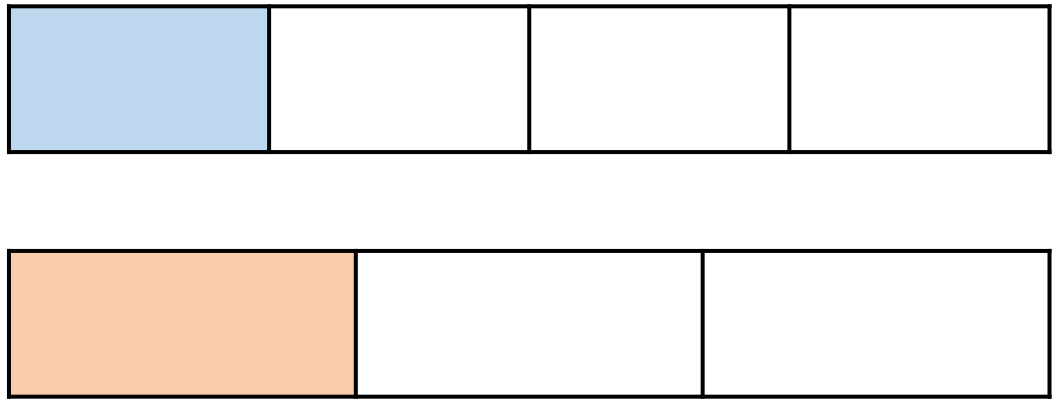
$$\frac{3}{9}$$



$$\frac{2}{9} + \frac{3}{9} = \frac{5}{9}$$

How can you use fraction strips to help you calculate

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



We need to find a common denominator.

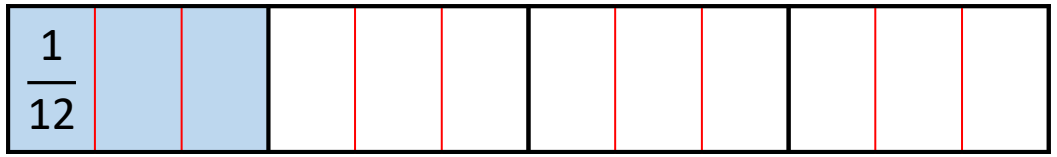
We must find the lowest common multiple of 4 and 3

We must find equivalent fractions for both fractions.

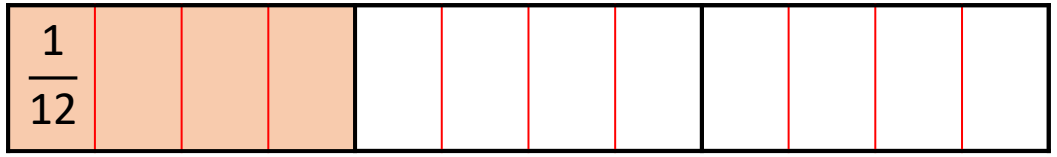
Have a think

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

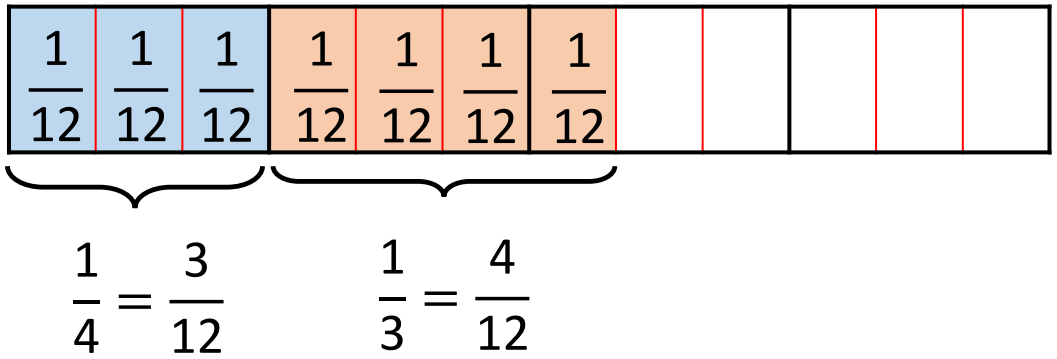
First divide each quarter into 3 equal parts.



Now divide each third into 4 equal parts.



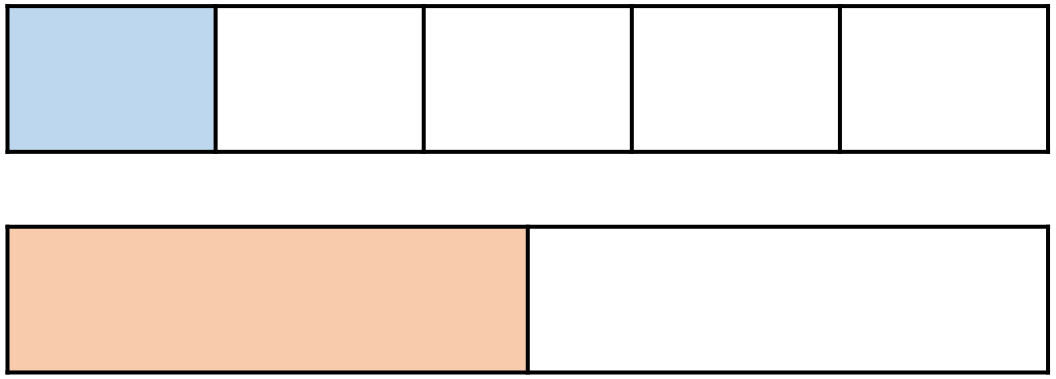
What do you notice?



$$\frac{1}{4}+\frac{1}{3}=\frac{3}{12}+\frac{4}{12}=\frac{7}{12}$$

Have a think

Use the fraction strips to help you work out $\frac{1}{5} + \frac{1}{2}$

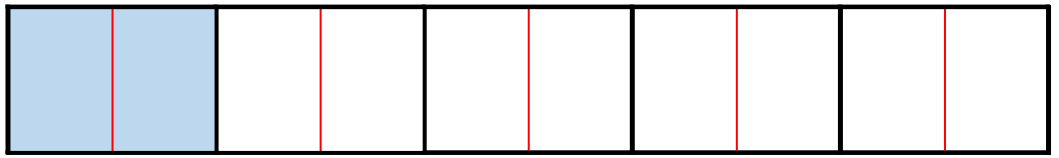


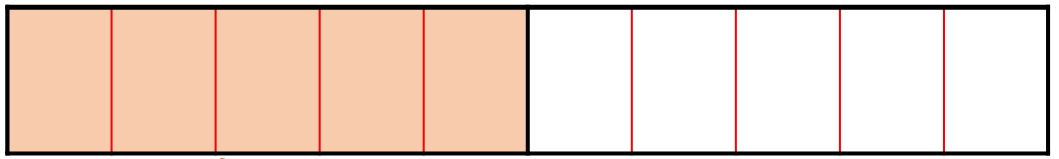
Think about what you need to divide each part in each fraction strip by.

$$\frac{1}{5}+\frac{1}{2}$$

Divide each part into 2

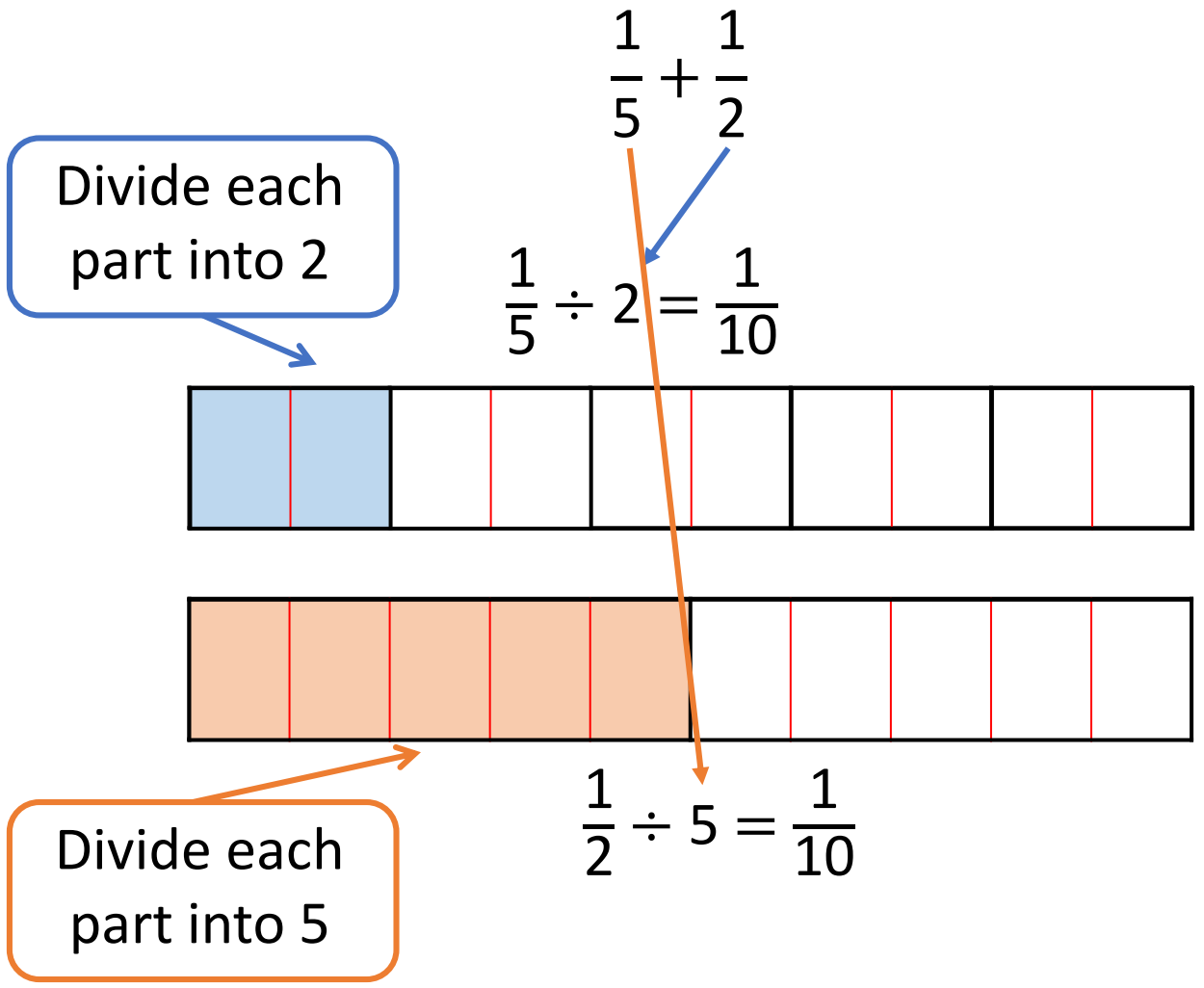
$\frac{1}{5}=\frac{2}{10}$





Divide each part into 5 $\frac{1}{2}=\frac{5}{10}$

$$\frac{1}{5}+\frac{1}{2}=\frac{2}{10}+\frac{5}{10}=\frac{7}{10}$$


$\frac{1}{5} + \frac{1}{2}$
Divide each part into 2
$\frac{1}{5} \div 2 = \frac{1}{10}$
$\frac{1}{2} \div 5 = \frac{1}{10}$
Divide each part into 5

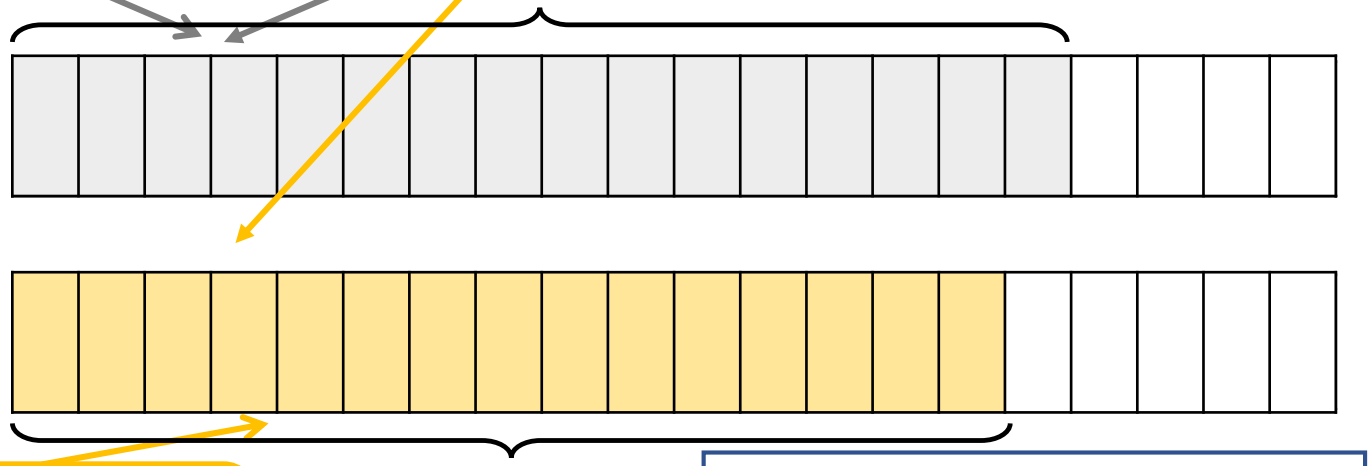
What will you divide each part in each fraction strip by to work out this calculation:

Have a think

$$\frac{4}{5} - \frac{3}{4} = \frac{1}{20}$$

Divide each part into 4

$$\frac{4}{5} = \frac{16}{20}$$



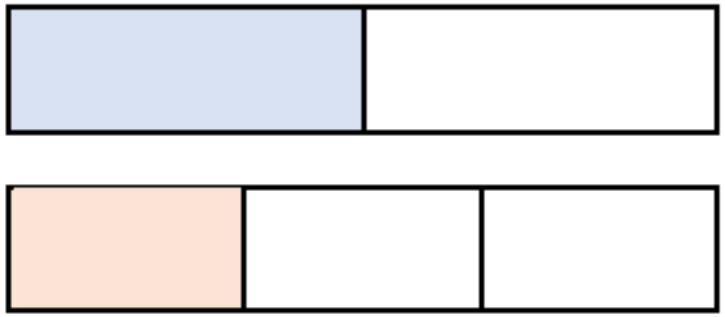
Divide each part into 5

$$\frac{3}{4} = \frac{15}{20}$$

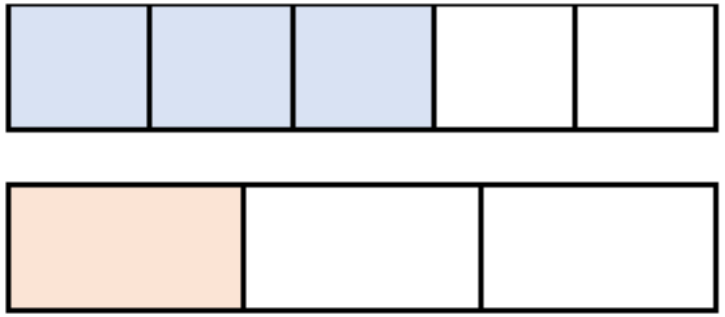
$$\frac{4}{5} - \frac{3}{4} = \frac{16}{20} - \frac{15}{20} = \frac{1}{20}$$

1) Use the fraction strips to help you add together

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

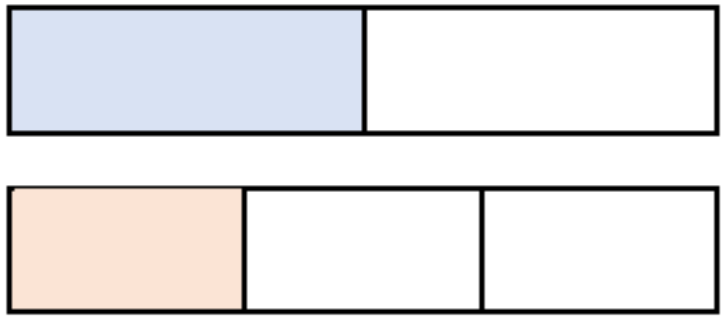


$\frac{3}{5} + \frac{1}{3} =$

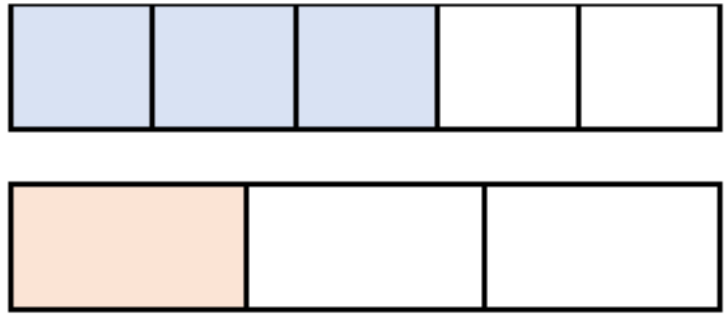


2) Use the fraction strips to help you subtract

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

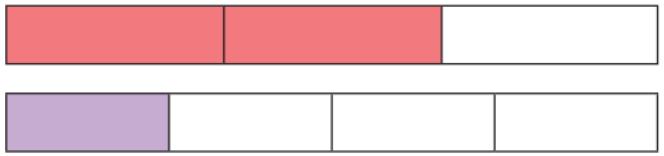


$\frac{3}{5} - \frac{1}{3} =$



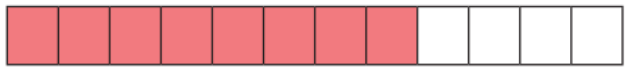
Add and subtract fractions (2)

1 Amir is using fraction strips to work out $\frac{2}{3} + \frac{1}{4}$



Amir says he needs to find a common denominator.

a) Complete Amir's method.



$\frac{2}{3} = \frac{\square}{12}$

$\frac{1}{4} = \frac{\square}{12}$

$\frac{2}{3} + \frac{1}{4} = \frac{\square}{12} + \frac{\square}{12} = \frac{\square}{12}$

b) Show the addition on the fraction strip.

c) Could you have used a different denominator?

2 What common denominator can you use to add the fractions?

a) $\frac{2}{5} + \frac{1}{2}$ Common denominator = $\square$

b) $\frac{2}{3} + \frac{4}{5}$ Common denominator = $\square$

c) $\frac{7}{8} - \frac{1}{4}$ Common denominator = $\square$

d) $\frac{7}{9} - \frac{1}{6}$ Common denominator = $\square$

e) $\frac{11}{15} + \frac{3}{10}$ Common denominator = $\square$

3 Ron and Eva are working out $\frac{1}{4} + \frac{5}{6}$

Ron's method

$\frac{1}{4} + \frac{5}{6} = \frac{3}{12} + \frac{10}{12} = \frac{13}{12}$

Eva's method

$\frac{1}{4} + \frac{5}{6} = \frac{6}{24} + \frac{20}{24} = \frac{26}{24}$

a) What is the same about Ron's and Eva's methods?

b) What is different about their methods?

c) Which method do you prefer? Why?

© White Rose Maths 2019

4 Complete the calculations.

a) $\frac{1}{5} + \frac{3}{4} =$ ☐

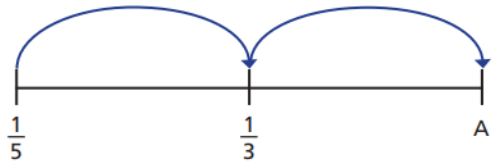
b) $\frac{7}{8} - \frac{1}{3} =$ ☐

c) $\frac{1}{2} - \frac{1}{7} =$ ☐

d) $\frac{11}{18} + \frac{7}{12} =$ ☐

5 Mo is drawing jumps on a number line.

The jumps are the same size.



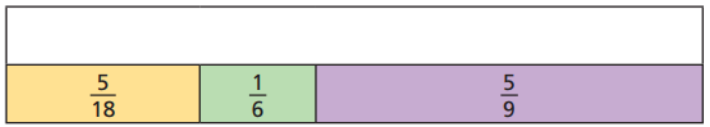
a) What is the size of the jump?

☐

b) What is the value of A?

☐

6 Complete the bar model.



7 Complete the additions.

Give your answers as mixed numbers and as improper fractions.

a) $\frac{4}{5} + \frac{5}{4} =$ ☐ $=$ ☐

b) $\frac{2}{3} + \frac{3}{2} =$ ☐ $=$ ☐

c) $\frac{9}{8} + \frac{8}{9} =$ ☐ $=$ ☐

d) ☐ $=$ ☐ $= \frac{5}{3} + \frac{3}{5}$

What patterns do you notice?

8 Look at these additions.

$\frac{1}{2} + \frac{1}{3} =$ ☐

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

$\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} =$ ☐

a) When does this pattern first give an answer greater than 2?

_____

_____

b) Do you think the pattern will ever give an answer greater than 100?

© White Rose Maths 2019

Name:_____

Week 9 Session 4
2020-21
Full Programme
4 a week

Times Tables Rock Stars

Licensed to East Ayton Primary School

6,7 Times Tables

1	6 × 2 = _____	21	7 × 5 = _____	41	72 ÷ 6 = _____
2	6 × 4 = _____	22	6 × 11 = _____	42	48 ÷ 6 = _____
3	7 × 7 = _____	23	7 × 10 = _____	43	56 ÷ 7 = _____
4	7 × 4 = _____	24	6 × 12 = _____	44	6 ÷ 6 = _____
5	7 × 3 = _____	25	6 × 9 = _____	45	7 ÷ 7 = _____
6	6 × 9 = _____	26	7 × 2 = _____	46	35 ÷ 7 = _____
7	6 × 4 = _____	27	7 × 5 = _____	47	54 ÷ 6 = _____
8	6 × 8 = _____	28	7 × 8 = _____	48	14 ÷ 7 = _____
9	7 × 10 = _____	29	7 × 2 = _____	49	30 ÷ 6 = _____
10	7 × 9 = _____	30	6 × 7 = _____	50	7 ÷ 7 = _____
11	6 × 11 = _____	31	36 ÷ 6 = _____	51	66 ÷ 6 = _____
12	7 × 3 = _____	32	70 ÷ 7 = _____	52	12 ÷ 6 = _____
13	7 × 9 = _____	33	84 ÷ 7 = _____	53	42 ÷ 6 = _____
14	7 × 9 = _____	34	18 ÷ 6 = _____	54	12 ÷ 6 = _____
15	6 × 3 = _____	35	72 ÷ 6 = _____	55	28 ÷ 7 = _____
16	7 × 7 = _____	36	60 ÷ 6 = _____	56	42 ÷ 6 = _____
17	7 × 2 = _____	37	6 ÷ 6 = _____	57	63 ÷ 7 = _____
18	7 × 10 = _____	38	35 ÷ 7 = _____	58	54 ÷ 6 = _____
19	7 × 9 = _____	39	14 ÷ 7 = _____	59	70 ÷ 7 = _____
20	7 × 5 = _____	40	21 ÷ 7 = _____	60	35 ÷ 7 = _____

Time taken

:

3 minute time limit

Score

60

Add up your time

Mins

S1 _____

S2 _____

S3 _____

S4 _____

Total _____

Secs

S1 _____

S2 _____

S3 _____

S4 _____

Total _____

Add up your score

S1 _____

S2 _____

S3 _____

S4 _____

Total _____

Guided Reading

Chapter One

A Not Quite Normal Day

It began on a Friday, as strange things often do. This particular Friday had been stranger than most, although it had started normally enough. Elliot Hooper got up at 7.30am as normal, made his Mum breakfast at 8.15am as normal, went to school at 8.55am as normal and was in the Headmaster's office by 9.30am, which was in fact, slightly later than normal.

'Oh Elliot,' sighed Graham Sopweed, headmaster of Brysmore Grammar School. 'What are we going to do with you?'

He looked into the blue-green eyes of the 13-year-old boy before him, as Elliot scratched his shaggy blonde head for an answer. Two years earlier, Graham Sopweed had watched as Elliot was proudly escorted through Brysmore's gates by his Mum, Nan and Grandad. The reports from his primary school had been glowing. "Elliot Hooper is a wonderful student who is sure to set Brysmore alight," his previous headmistress promised. There was no doubt that Elliot was a bright boy, but after a promising start, the past year had seen a big change in this young man and not for the better. Elliot Hooper hadn't set Brysmore alight. But Mr Sopweed was more than a little concerned that he might set the school on fire.

'It's a tricky one, Sir,' Elliot replied after a lengthy pause. 'It's really a question of everyone's best interests. And the simple fact is that I don't want to be at this school, the teachers don't want me to be at this school, the pupils don't want me or the teachers to be at this school, so perhaps it's time we admitted defeat and everyone got home in time for *Deal or No Deal*.'

Read the extract of chapter one, **'A Not Quite Normal Day.'**

4) Why has the author repeated the word 'normal' in the first paragraph?

_____ (1 mark)

5) Find a word that is a synonym for guided.

_____ (1 mark)

6) What is Mr Sopweed worried that Elliot might do to the school?

_____ (1 mark)

7) Find evidence that Elliot doesn't want to stay at school.

_____ (1 mark)

Grammar focus

8) Find an example of an apostrophe for contraction. _____ (1 mark)

9) Find 3 adjectives from the text. _____ (1 mark)

10) Find a hyphenated word in the text. _____ (1 mark)

English – To write my diary entry

Part 4 (example below) - Beowulf returns victorious, Hrothgar thanks Beowulf for his courage and heroism but tells him that this will not last forever.

460AD

I returned to the mead hall with my trophies: the head of Grendel and his mother. I could see the relief my trophies brought Hrothgar and his wife, and I was glad. I had finally fulfilled my promise to rid their land of evil and the honour of my father and King Hygelac was intact. Hrothgar was exceedingly generous with his hospitality and his wealth and he gave me many lavish gifts. Before my departure he spoke to me candidly and said the following words which will stay with me for the rest of my days.

‘‘Do not become like other heroes before you, Beowulf. Bloodthirsty and proud. I am old in years but in my youth, I was a peerless warrior who never lost a battle. Men are frail and our lives are finite. Even with you the end must come – your strength will fail. Waiting for you is sickness maybe, or a slashing sword, or a burning fire, or old age. Death awaits us all.’’

I will listen to Hrothgar’s wise council and return to my homeland a better man than when I left.

Science

Science

Living Things and Their Habitats

Aim

- I can describe how living things are classified into groups.

Success Criteria

- I can describe who Carl Linnaeus was.
- I can explain how living things are classified using the Linnaean system.
- I can classify living things using the Linnaean system.

twinkl.co.uk

A Standard System

In the previous lesson you classified animals by sorting and grouping them based on their similarities and differences. Did everyone in the class sort and group the animals in the same way?

They most probably did not! However, scientists need to use a standard recognised method for classifying living things.

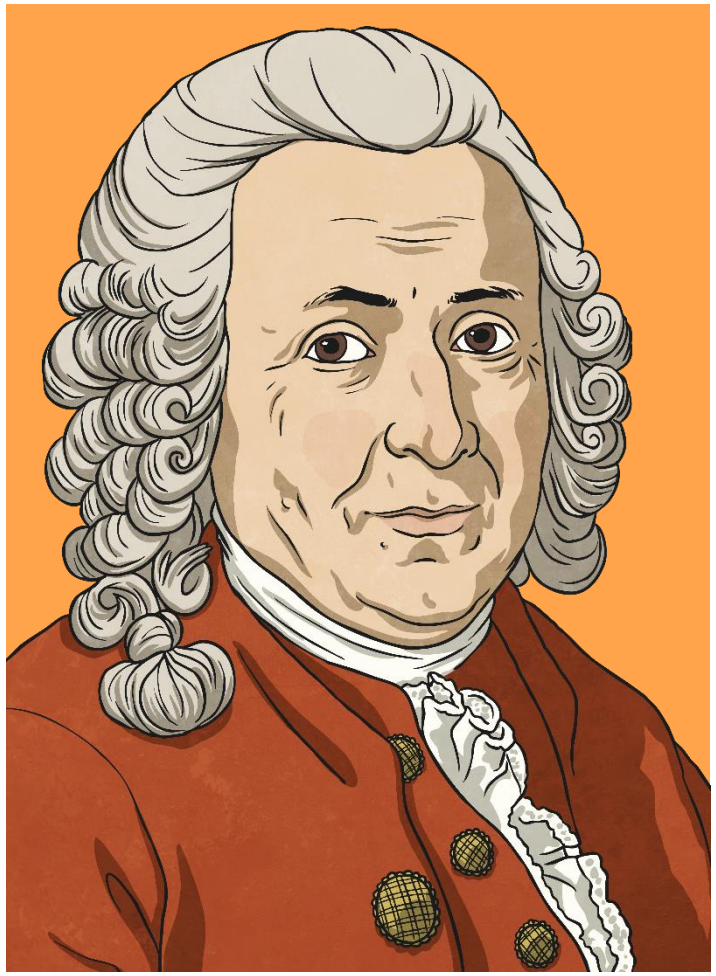
Talk to your partner about why this would be important.

Who Was Carl Linnaeus?

Carl Linnaeus was a Swedish scientist who believed it was very important to have a standard system of classification. At the time he was alive, in the 1700s, there was no agreed standard method.

Linnaeus collected and examined over 40,000 specimens of plants, animals and shells. In 1735, he published his first edition of ‘Systema Naturae’, which described his system for classifying living things.

Over the next several years, Linnaeus continued to publish new editions of ‘Systema Naturae’ that included more species of living things. His tenth edition was published in 1758 and is considered to be the most important edition.



The Linnaean System

Linnaeus' original system of classification classified everything in nature into a hierarchy.

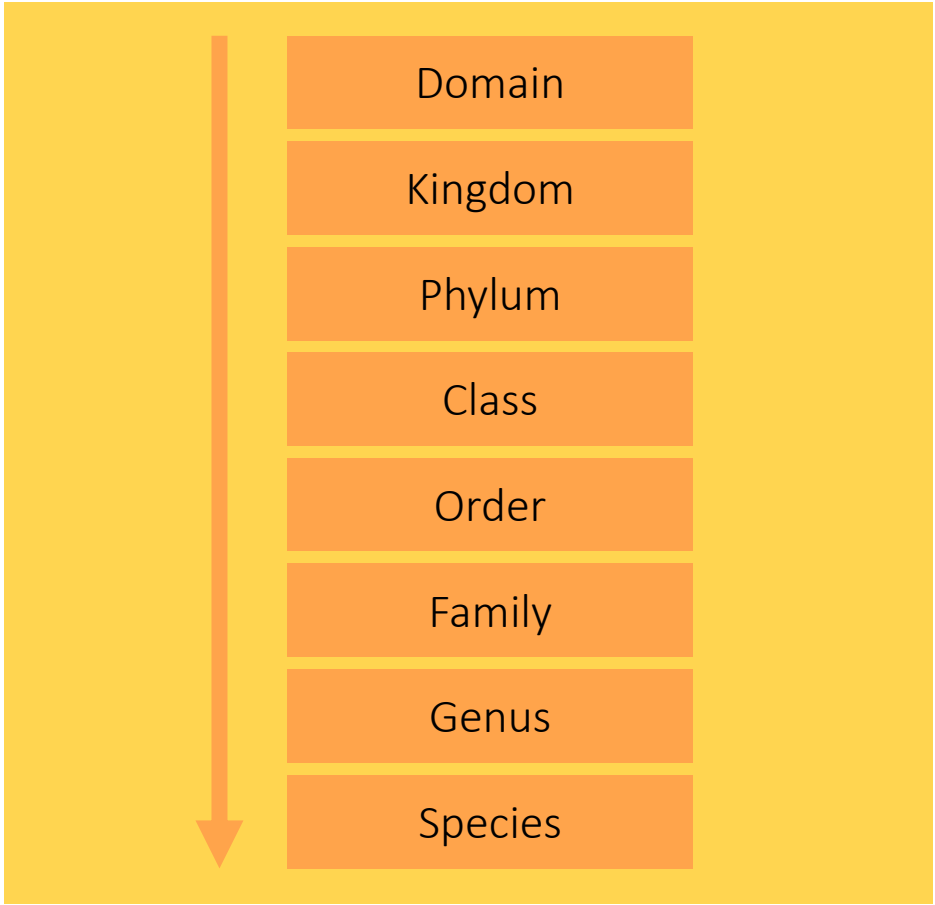
He proposed that there were three large groups, called kingdoms, into which the whole of nature could fit. These kingdoms were plants, animals and minerals. He then split each kingdom into smaller and smaller groups, or levels.

Today, the Linnaean system is only used to classify living things, so it does not include minerals. Furthermore, as new living things have been discovered, scientists have had to add additional levels in the hierarchy. A new level above kingdom, called domain, has also been introduced.

The Linnaean System

This diagram shows the levels of classification in the Linnaean system.

Living things can be classified by following the levels in this system. The number of living things in each group gets smaller and smaller, until there will just be one type of animal in the species group.



The Linnaean System

There are 3 domains: Archaea, Bacteria and Eukarya. Plants and animals are all eukaryotes.

There are 6 kingdoms, including animals, plants, fungi and bacteria.

The 6 kingdoms are then split into phyla. There are more than 30 phyla in the animal kingdom. Phylum chordata includes all vertebrates.

Each phyla is divided into classes. The chordata phylum includes amphibians, birds, mammals, reptiles and fish.

The order and the family divide into further groups.

The genus includes species that are very closely related and share unique body structures.

A species is defined as a group of animals that can reproduce to produce fertile offspring.

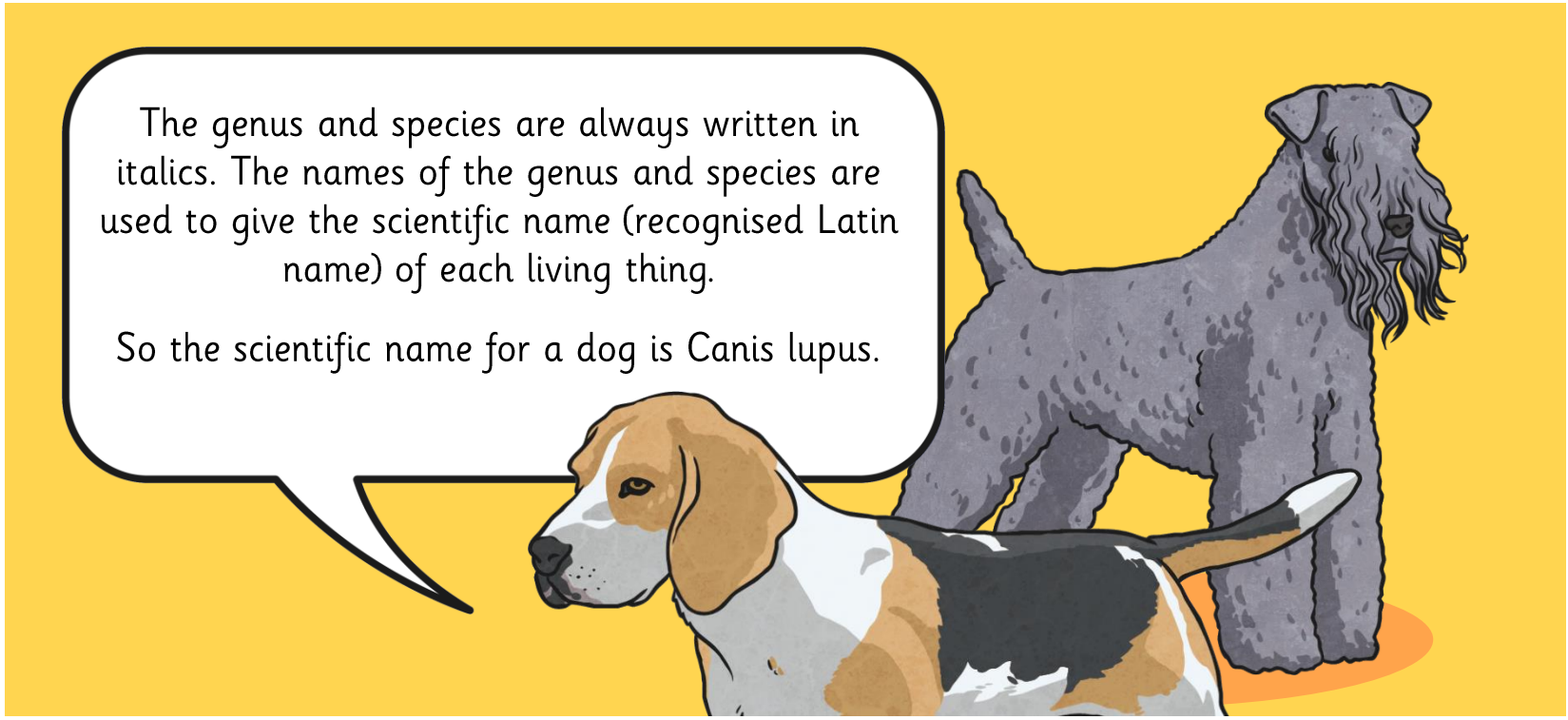
Classifying Species

Here you can see how a species can be classified at each level of the standard system.

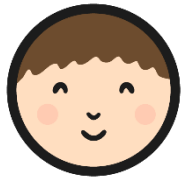
Domain: Eukarya	jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox, human
Kingdom: Animals	jackal, clownfish, cat, dog, ladybird, rabbit, fox, human
Phylum: Chordata	jackal, clownfish, cat, dog, rabbit, fox, human
Class: Mammals	jackal, cat, dog, rabbit, fox, human
Order: Carnivora	jackal, cat, dog, fox
Family: Canidae	jackal, dog, fox
Genus: *Canis*	jackal, dog
Species: *Lupus*	dog

Classifying Species

Genus: *Canis*	jackal, dog
Species: *Lupus*	dog



Classifying Species Activity



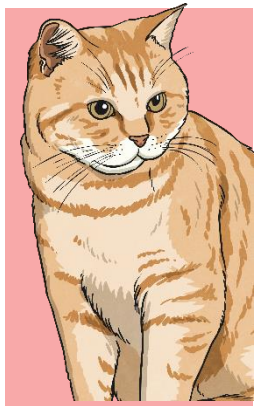
Choose another living thing from the list below and follow the levels of the classification system to classify it. Complete your Classifying Species Activity Sheet to show how it fits into each level of the standard system.

Use the genus and the species to give the scientific name of the species.

You will need to use books or the Internet to research the animal and find the information you need.

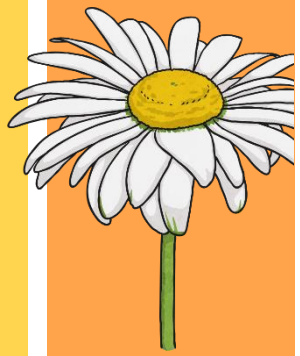
jackal

clownfish

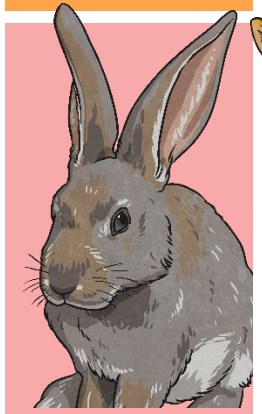


cat

ladybird



daisy

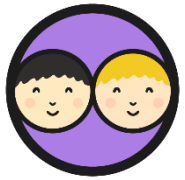


rabbit

fox

human

Invent a Mnemonic



The levels of the classification system can be tricky to remember. Work with your partner to invent a mnemonic to help you!

The letters you need to use are:

D	K	P	C	O	F	G	S
Domain	Kingdom	Phylum	Class	Order	Family	Genus	Species

An example mnemonic could be:

Does Keep Precious Creatures Organised For Grumpy Scientists

Choose one of the living things on the list. Use the internet to research the living thing and complete the activity sheet showing how the species is classified at each level of the standard system.

Classifying Species

Choose one of the living things below and find out how it is classified in the Linnaean system.

jackal	clownfish	cat	ladybird
daisy	rabbit	fox	human

Complete the levels of classification to show what you have found out.

Living thing: _____

Domain: _____

Kingdom: _____

Phylum: _____

Class: _____

Order: _____

Family: _____

Genus: _____

Species: _____

What is the scientific name of your chosen living thing?

_____

twinkl.co.uk

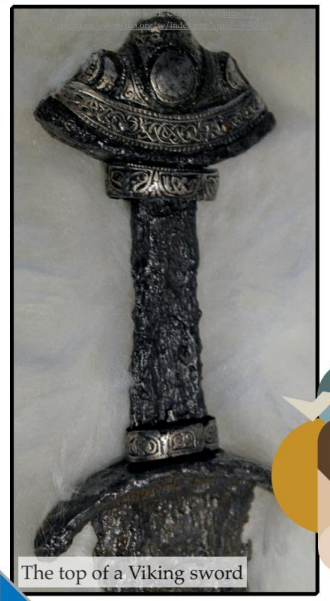
Art

twinkl.co.uk

Viking Art

Learning Objective:
To be able to draw Viking patterns.

NEXT


The top of a Viking sword

A piece of Viking jewellery

By Zwölfhundertvierunddreißig - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=34865582

What do these three pieces of Viking artwork have in common?

A Viking picture stone

By Jürgen Howaldt - Own work (selbst erstelltes Foto), CC BY-SA 2.0 de, https://commons.wikimedia.org/w/index.php?curid=319140

BACK

NEXT

twinkl.co.uk

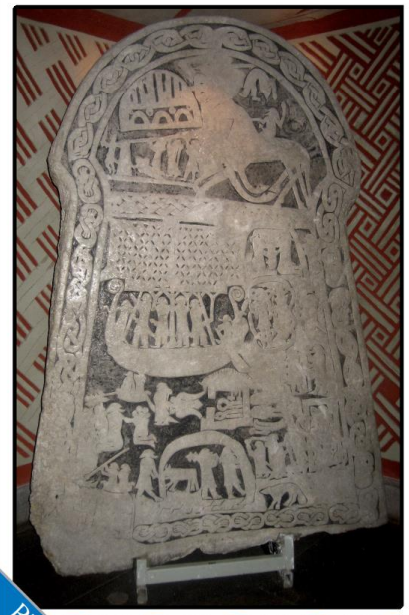
One of the main features of Viking art is knots and interweaving patterns. This was also a feature of Celtic art and there are lots of examples of both that have been found in Britain.

These kinds of patterns were often used as borders or as a decorative feature on carvings, jewellery and weaponry.

A knotted pattern on an Anglo-Saxon monument

BACK

NEXT

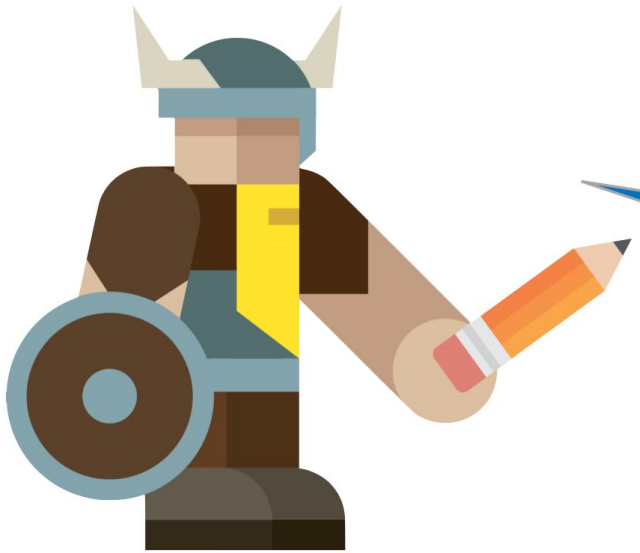


By mararie - Flickr: picture stone, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=24273698

BACK

NEXT

twinkl.co.uk

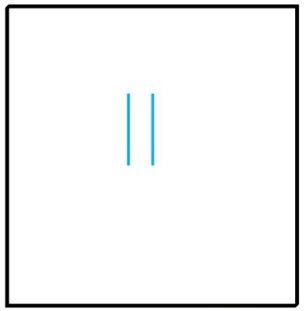


Today we're going to learn how to draw some Viking knots and other patterns. Have you got something to draw with?

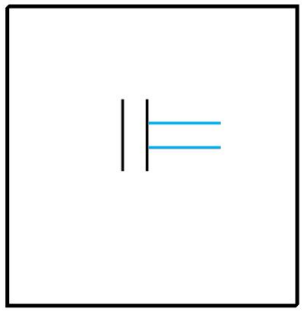
BACK

NEXT

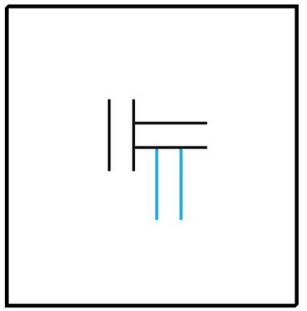
A basic Viking knot



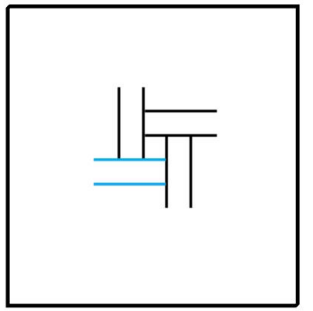
Draw two parallel vertical lines.



Draw two parallel horizontal lines coming off the right-hand vertical line. Make sure they are central to the other lines.



Draw two more vertical parallel lines coming off the bottom horizontal line.

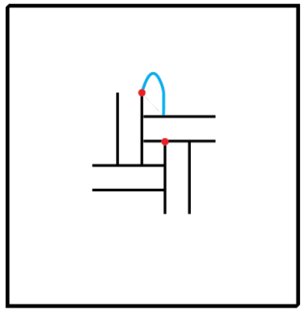


Draw two more horizontal parallel lines. Make sure the top line meets the bottom of the first two lines you drew.

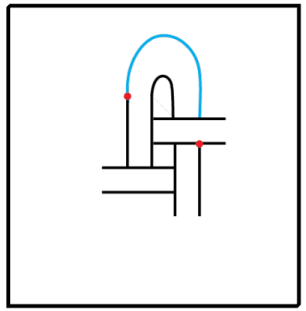
BACK

NEXT

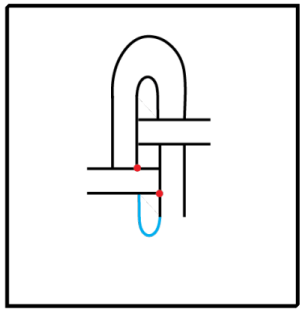
twinkl.co.uk



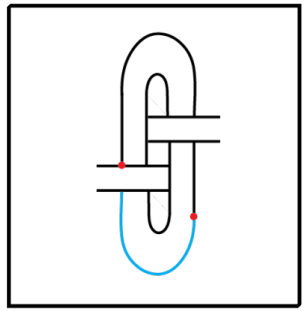
Draw a curved line to join the two points that are marked by the red dots BUT make sure you don't draw all the way through the horizontal line!



Now draw another curved line to join these two points. Try and make the path you are creating the same width all the way around.



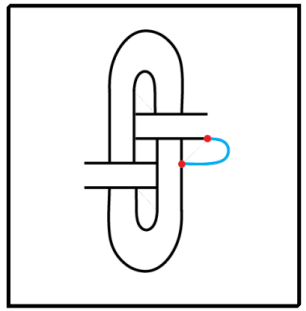
Now do the same thing on the bottom. Join the two points marked by the red dots but don't go through the horizontal line.



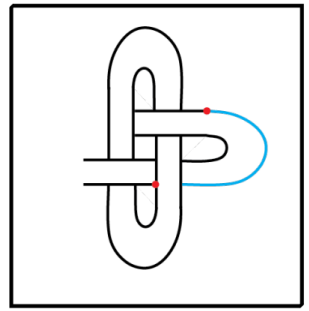
Join the two red dots up with a curved line, keeping the path the same width all the way round.

BACK

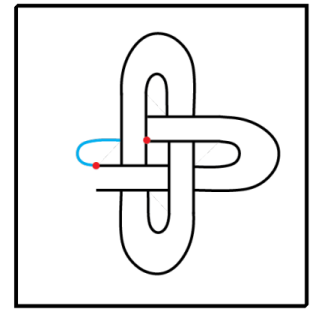
NEXT



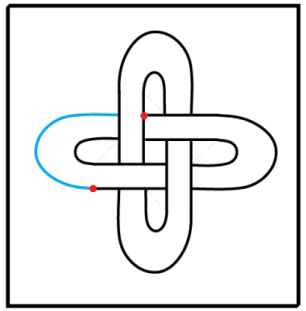
Draw a curved line to join the two points that are marked by the red dots BUT make sure you don't draw all the way through the vertical line!



Join up the red dots again.



And again!



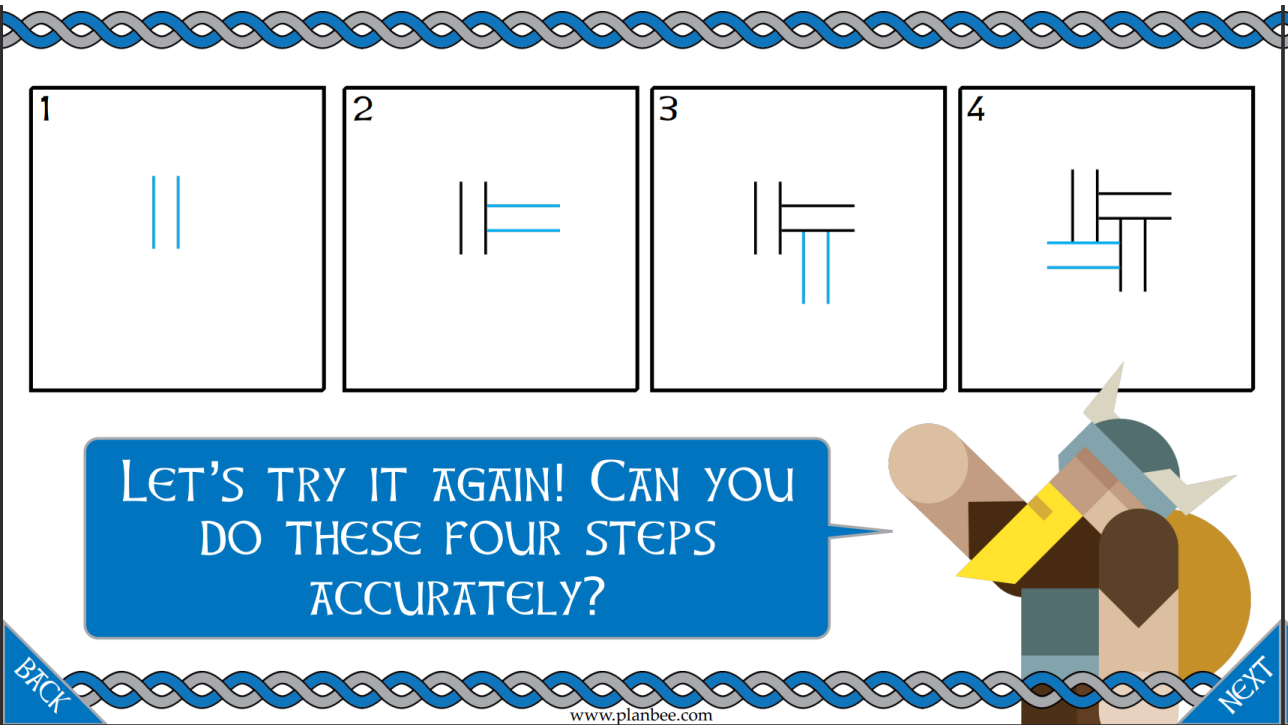
Last one!

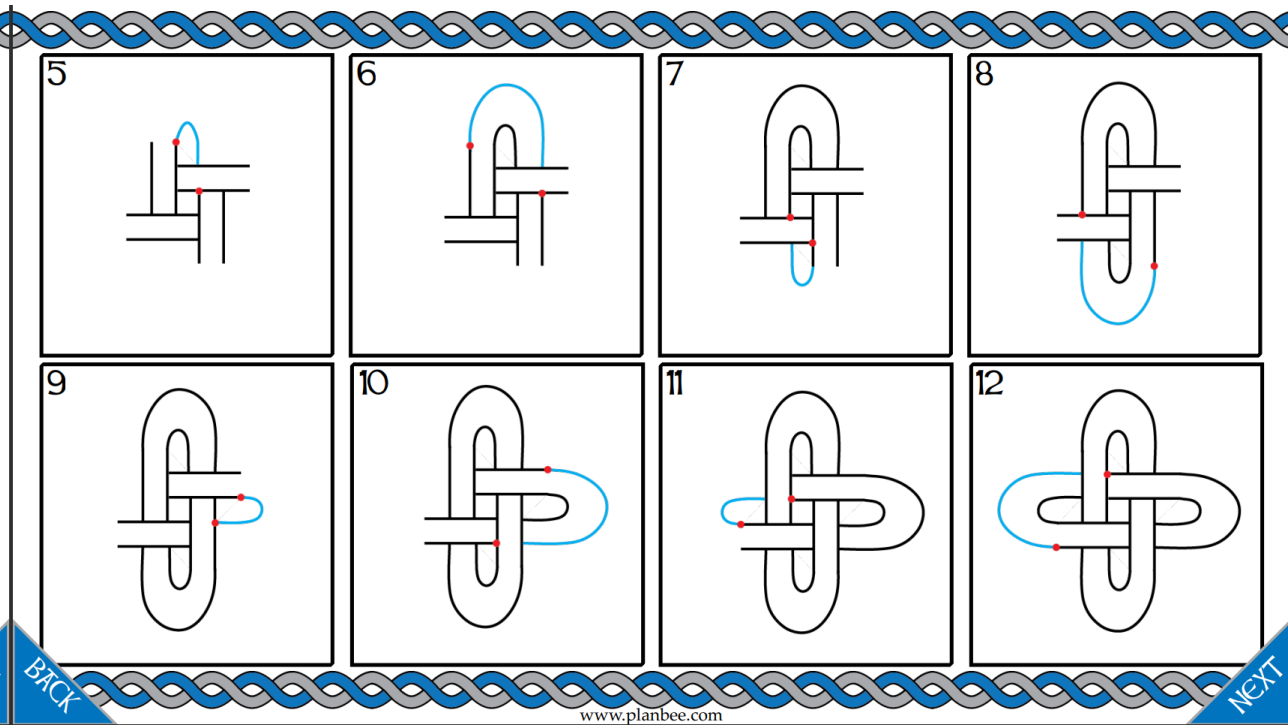
AND THERE YOU HAVE YOUR BASIC VIKING KNOT!

BACK

NEXT

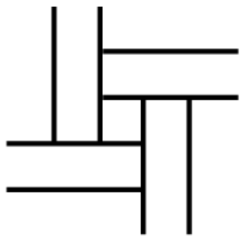
twinkl.co.uk


1
2
3
4
LET'S TRY IT AGAIN! CAN YOU DO THESE FOUR STEPS ACCURATELY?
BACK
NEXT
www.planbee.com


5
6
7
8
9
10
11
12
BACK
NEXT
www.planbee.com

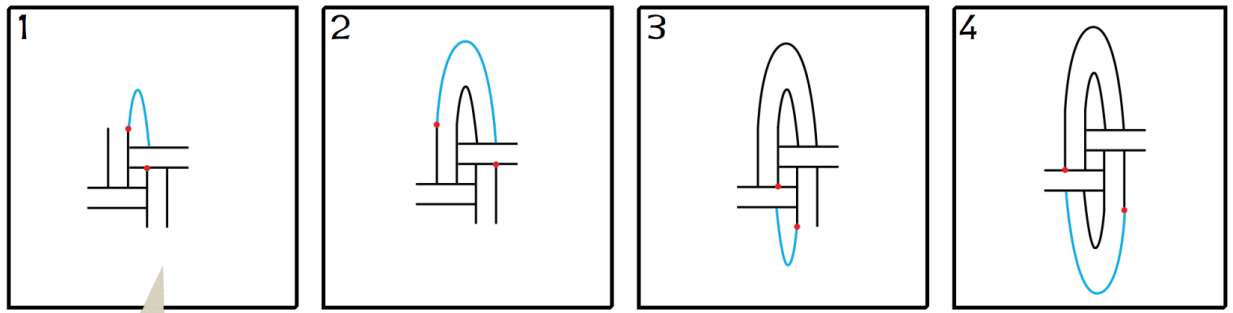
twinkl.co.uk

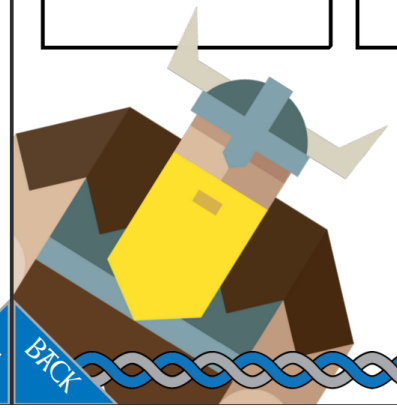
How did you get on with that one? Once you know the basics, you can alter the pattern a bit. Draw the first section again...



BACK

NEXT





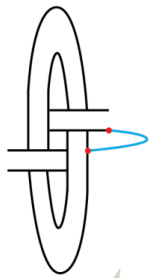
This time, make the loops pointier.

BACK

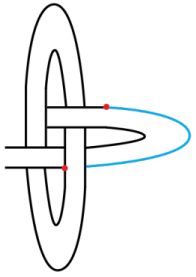
NEXT

twinkl.co.uk

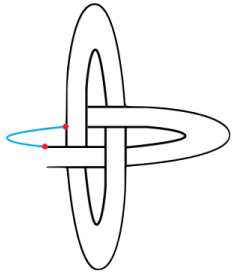
5



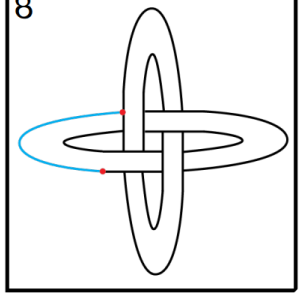
6

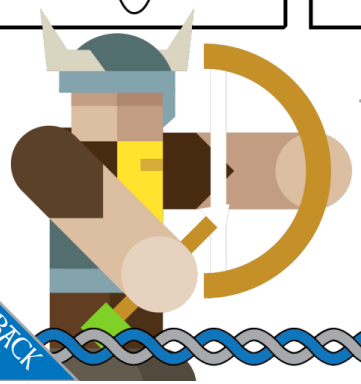


7

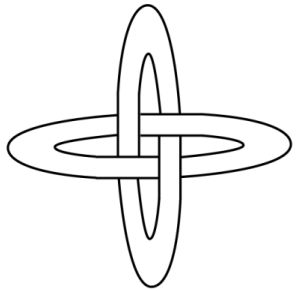


8



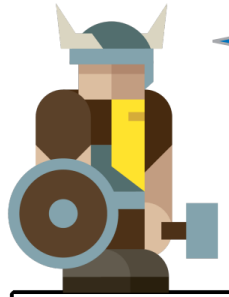


YOU THEN END UP WITH A SLIGHTLY DIFFERENT KNOT.

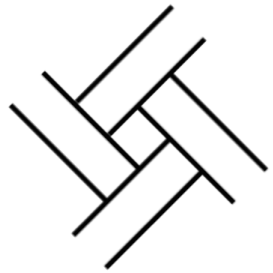


BACK

NEXT



LET'S TRY ANOTHER ONE! THIS TIME, DRAW ALL YOUR PARALLEL LINES ON A 45° ROTATION...



1

2

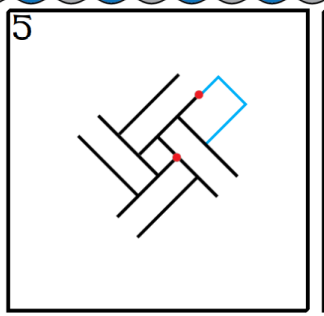
3

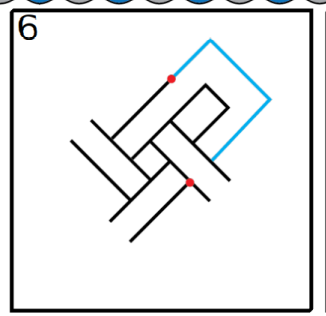
4

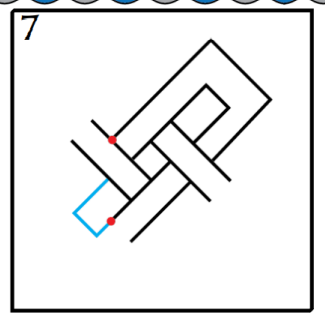
BACK

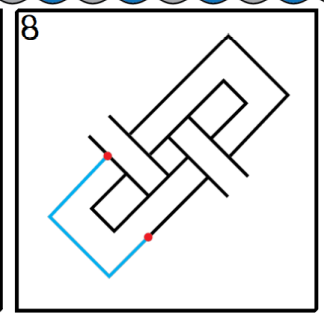
NEXT

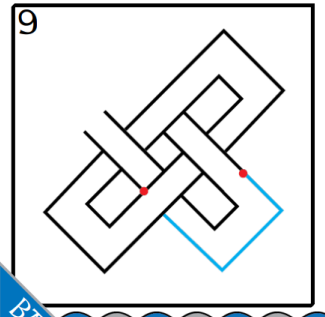
twinkl.co.uk

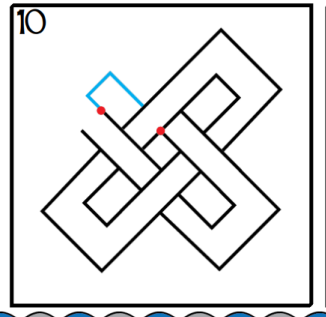


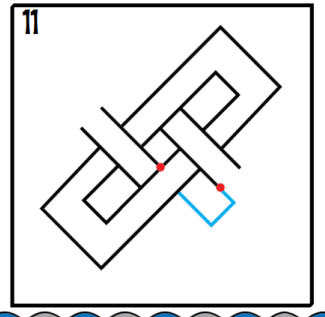


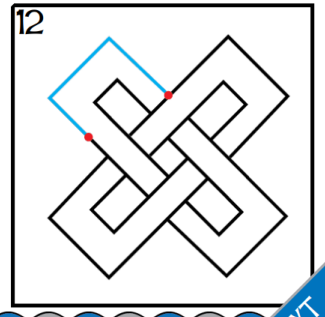






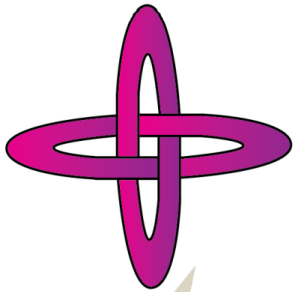




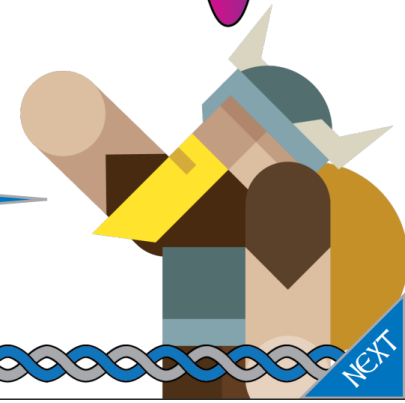


BACK

NEXT



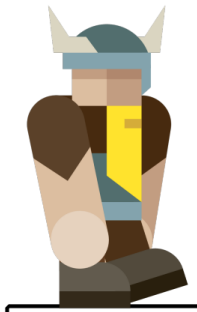
WHICH OF THESE DO YOU LIKE BEST? CAN YOU THINK OF ANY OTHER WAYS YOU COULD CHANGE THE KNOT?



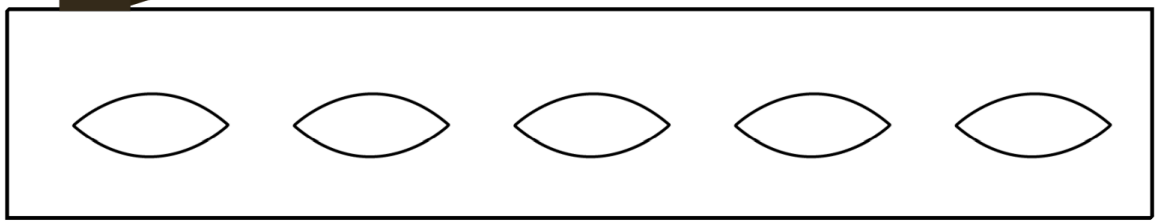
BACK

NEXT

twinkl.co.uk

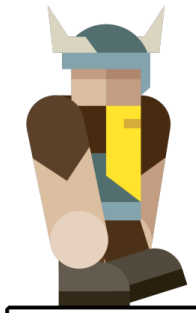


Let's try something else. Draw five almond shapes. Make them the same size and make sure they are an equal distance apart.

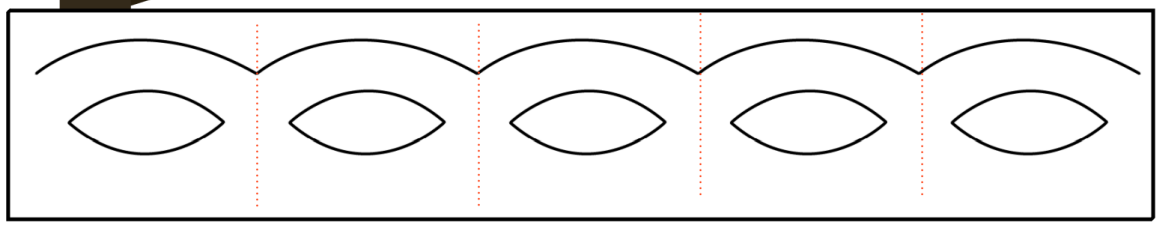


BACK

NEXT



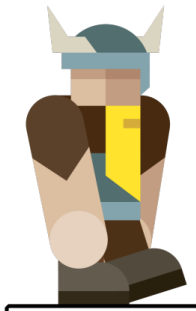
Draw some waves over the top of the almond shapes. Make sure the lowest point of the waves is in the middle of the two almonds.



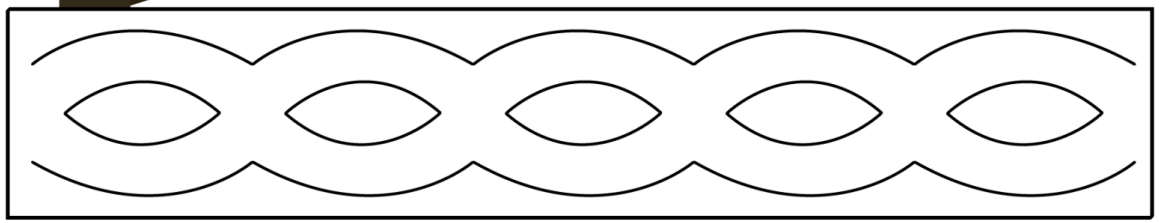
BACK

NEXT

twinkl.co.uk

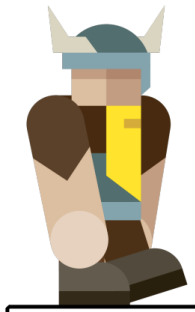


Do the same on the bottom. Make sure that both sets of waves are an equal distance from the almonds.

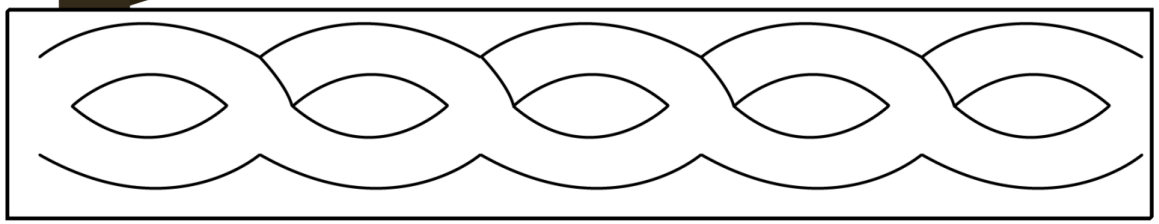


BACK

NEXT



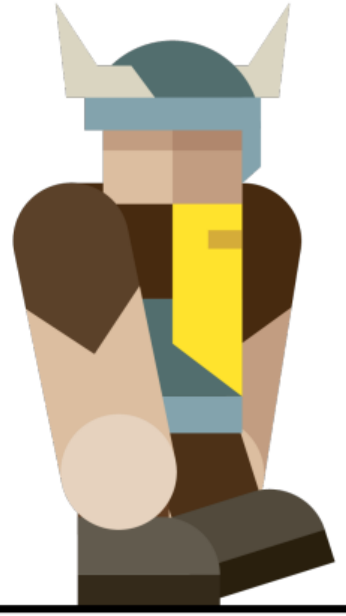
Draw a line from the bottom of every top wave to the left corner of the next almond. Do this all the way along.



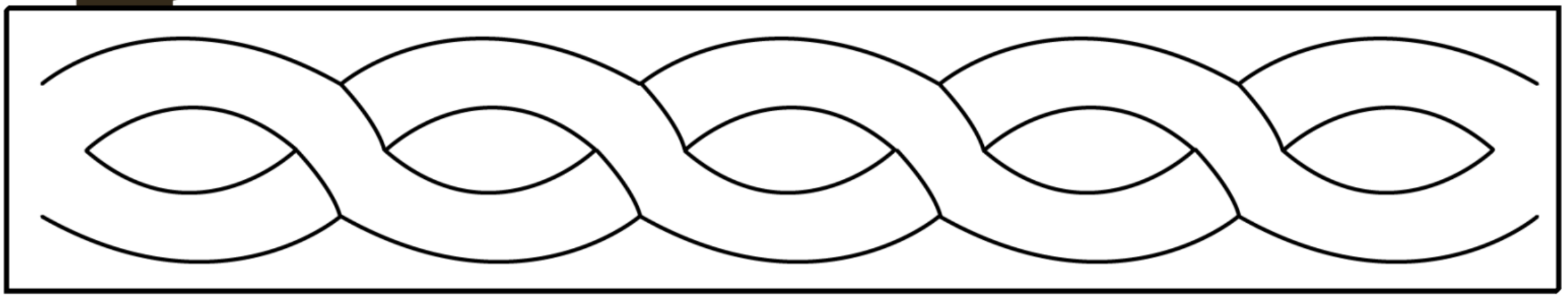
BACK

NEXT

twinkl.co.uk



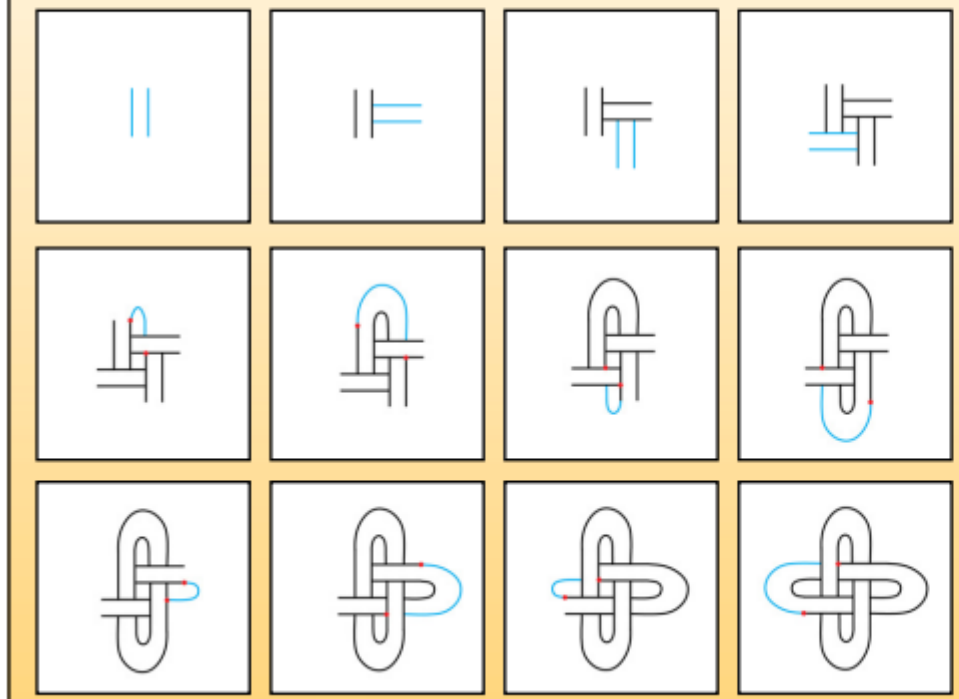
Now connect the top of each of the bottom waves to the right corner of the previous almond. Now you have a basic rope pattern!



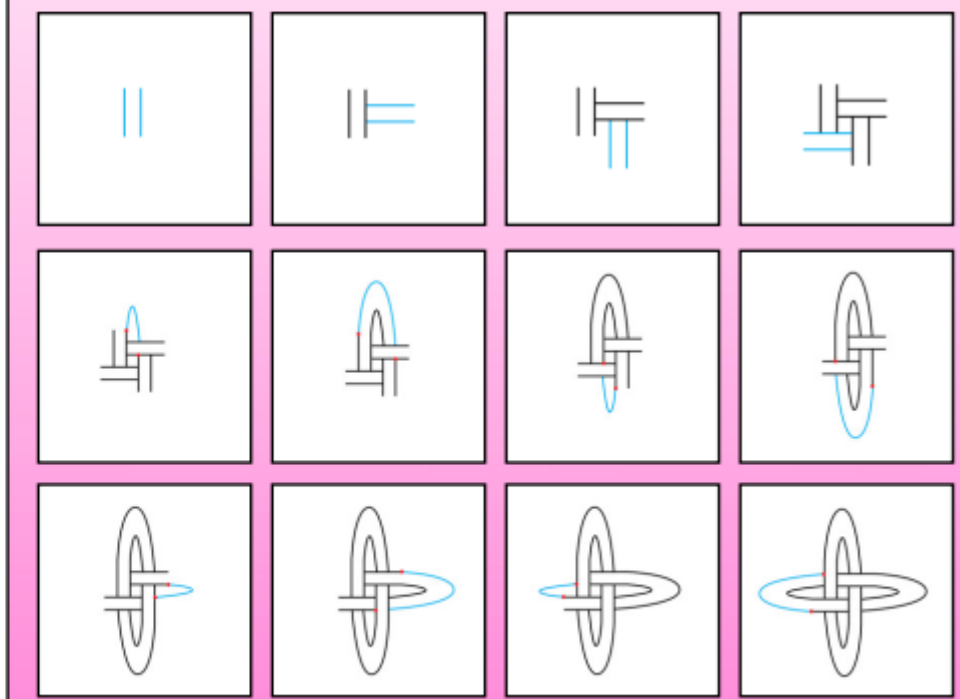
twinkl.co.uk

Use this space to practise drawing Viking knots and patterns.

Basic Viking Knot 1

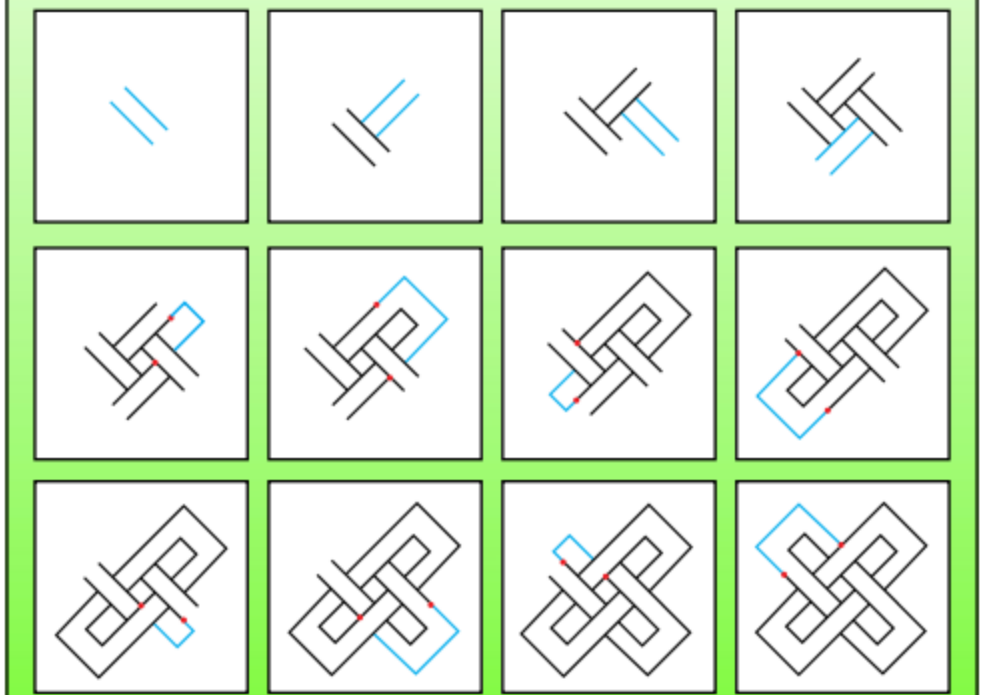


Basic Viking Knot 2

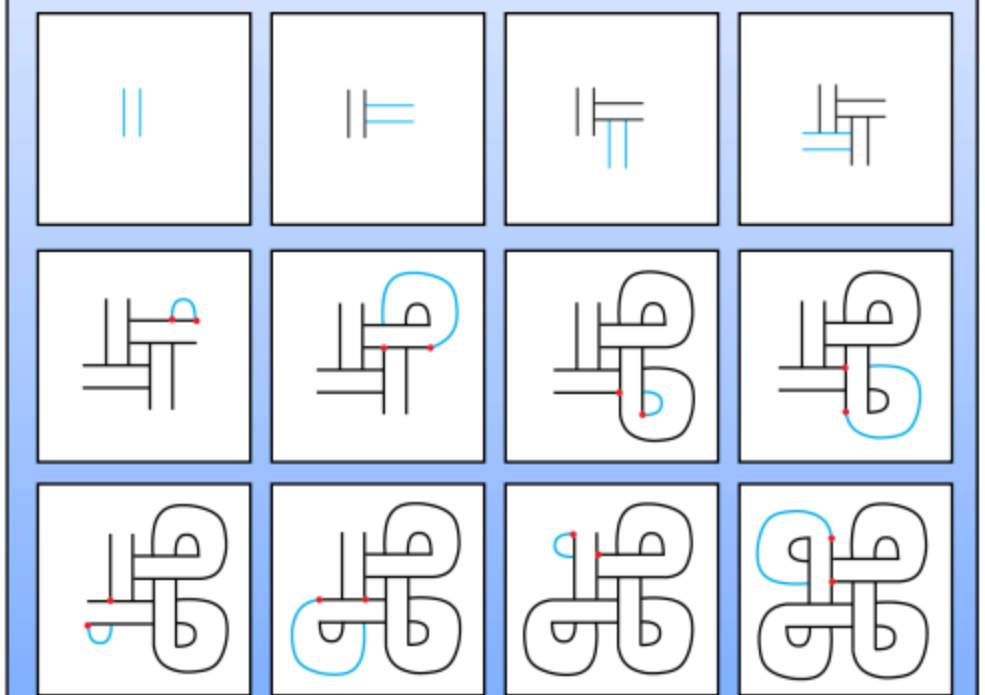


twinkl.co.uk

Basic Viking Knot 3

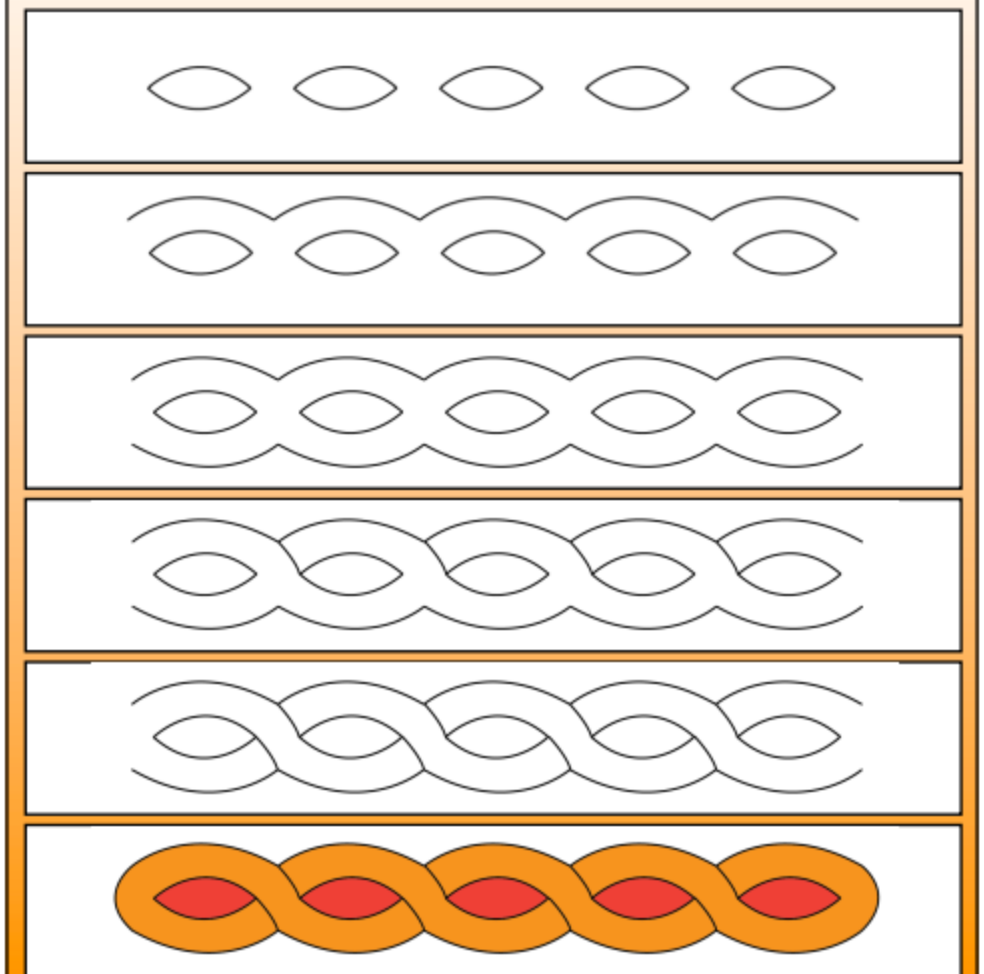


Basic Viking Knot 4



twinkl.co.uk

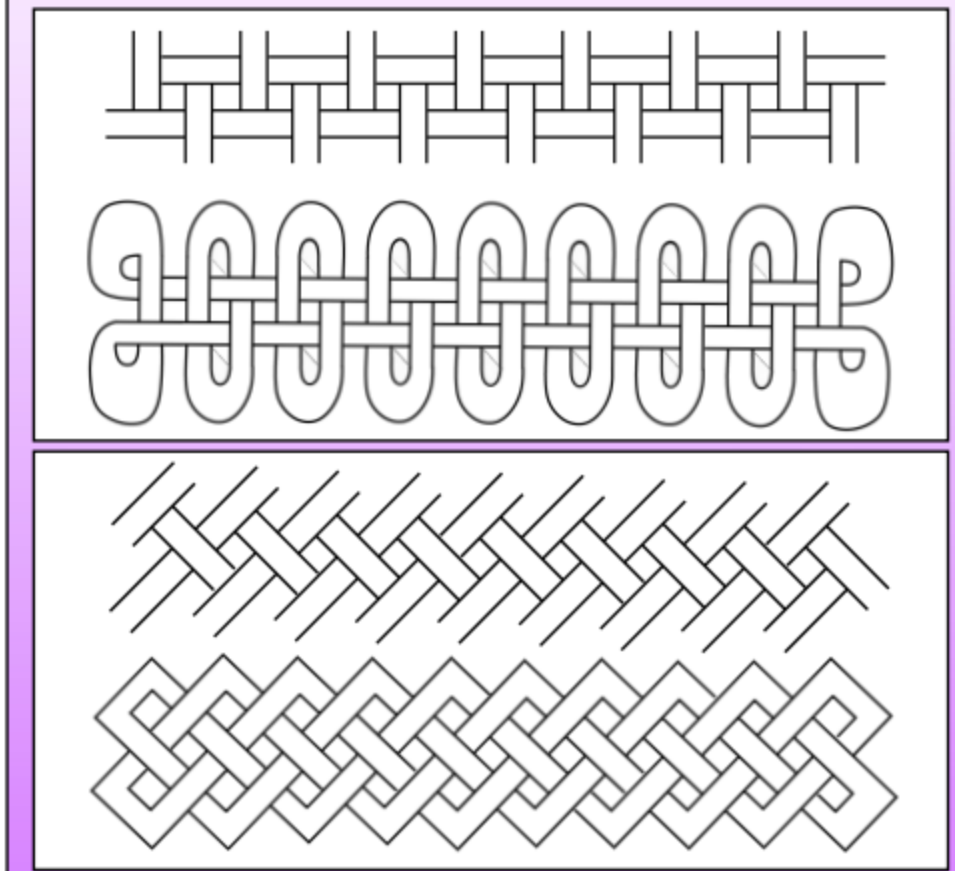
Basic Viking Rope



Using the Basics

Once you've mastered the basic knots, you can use them in lots of different ways to create larger knots and patterns.

Can you create some borders like these ones?



twinkl.co.uk

Creating Weaving Patterns

Vikings didn't always have structured knots and patterns. They often used random, swirling overlapping patterns. Follow the instructions below to see if you can create your own! It can be tricky so do lots of practising first!

Start by drawing a random pattern lightly in pencil.

Now make this a double line by drawing a second line close to the first. This can be tricky so be careful!

Where each section of the ribbon overlaps, choose ONE set of parallel lines to go over in pen. These 'bridges' will show whether the ribbon will go over or under so try to alternate them.

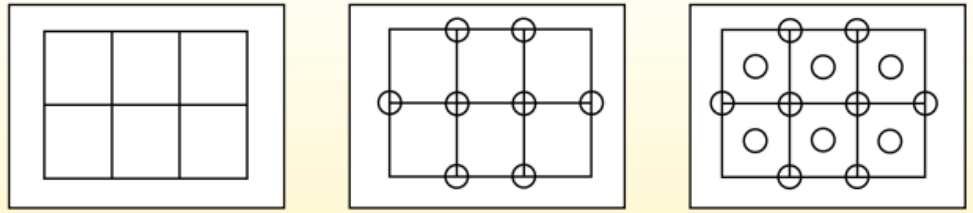
Now start connecting the rest of the ribbon in pen. If your pen reaches a bridge, STOP and continue on the other side of the bridge.

Keep going until you have connected each section of the bridge. It's really easy to make mistakes so try and picture where the ribbon is going.

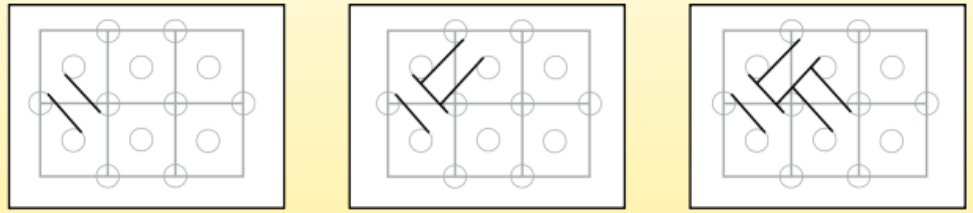
When you have done all your lines, rub out the pencil lines that are left. You will then have a weaving ribbon pattern!

twinkl.co.uk

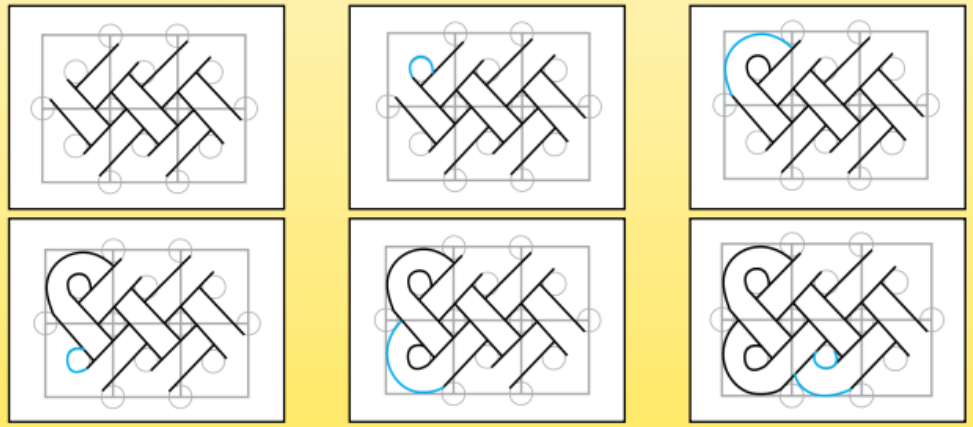
Viking Knot Pattern



Draw a 3x2 grid lightly in pencil, then lightly draw the circles on the places shown.



Use the circles as a guide to start drawing pairs of perpendicular parallel lines. Only draw a pair of lines if there are four circles to create a square.



Draw loops to start connecting the different strands of the knots. Use the circles as a guide and make sure you know how each strand joins up.

When you have completed the knot pattern, draw over it carefully with a black pen. Gently rub out any pencil marks.

CHALLENGE: ***What happens if you extend the grid? Can you make a knot in a 3x3 grid? How about a 4x5 grid?***

twinkl.co.uk