## At-Home Investigation

Revising fractions:

Last year you will have learned about halves, quarters and eighths. Today we are going to fold paper to make each of these fractions. Use rectangular paper and fold, then colour the following fractions. Draw the lines in with a pen, then take a photo of what you have made to send to your teacher.

If you can't send in a photo, you could use the boxes beneath to draw the fractions and label what you have made.

- One half $\frac{1}{2}$
- One quarter, two quarters, three quarters $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$
- One eighth, two eighths, four eighths, five eighths $\frac{1}{8}$ $\frac{2}{8}$ $\frac{4}{8}$ $\frac{5}{8}$

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

| $\frac{1}{8}$	$\frac{2}{8}$	$\frac{4}{8}$	$\frac{5}{8}$
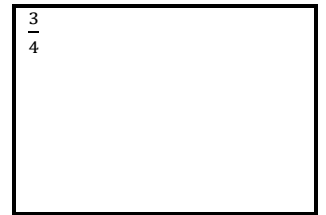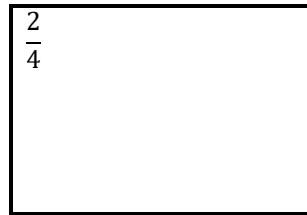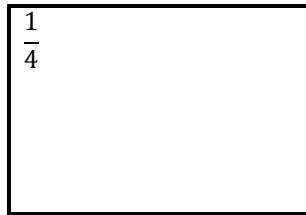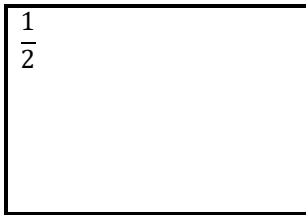
Compare the size:

Now that you have made each fraction, answer the following questions.

1. Which is the largest?

2. Which is the smallest?

3. Which fractions are the same size as each other?

Introducing thirds and fifths:

Think it through: When you folded eighths, how many pieces did you have to fold it into? Use this information to try and work out how you would fold thirds and fifths. Draw what you did below as accurately as you can. **Is three fifths bigger than three quarters?**
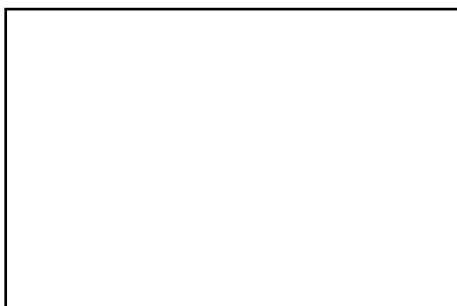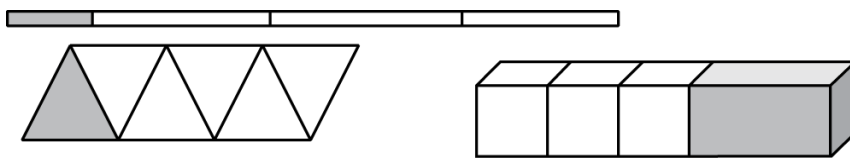
One quarter of shapes and collections

Today you will learn about the fraction 'one quarter'. You will learn why some pictures show one quarter and others don't, and what the symbol is for one quarter.

These pictures all show one quarter:
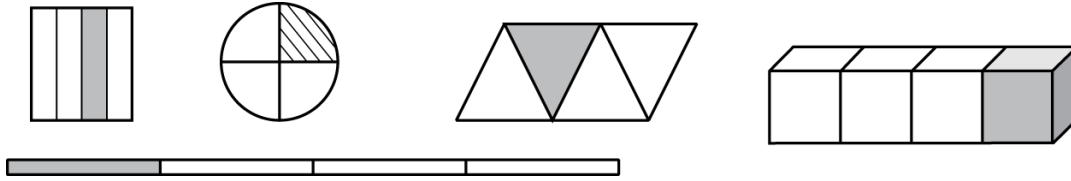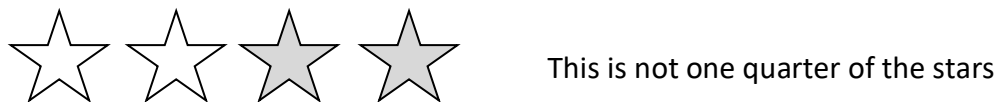
These pictures <u>do not</u> show one quarter:

What is the difference between the pictures that show one quarter and those that do not show one quarter?

This collection shows one quarter:

One quarter of the shoes are boots

The collections do not show one quarter:

This is not one quarter of the stars

This is not one quarter of the clocks

What is the difference between the collections that show one quarter and the collections that don't?

Symbol for one quarter

In this lesson you will learn about the symbol for one quarter. It is shown below next to the picture of one quarter.

Use the picture below to work out what the one means and what the four means for the symbol of one quarter. Fill in the boxes.

$$\frac{1}{4}$$
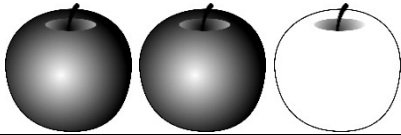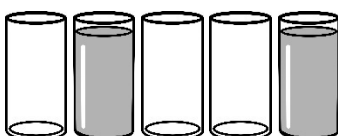
The 1 means:

The 4 means:

How is the symbol for one quarter similar to the symbol for one half? Why do you think it is similar?

How is the symbol for one quarter different from the symbol for one half? Why is it different?

Use what you have learned to join up the following statements:

The top number	says how many equal pieces there are altogether.
The bottom number	says how many pieces are shaded or indicated.

Generalising Question: Fill in the blanks for the following fractions, words and symbols

| Picture	Words	Symbols
	One third of the apples are peeled	$\dfrac{1}{3}$
	Two thirds of the stickers are stars	
		$\dfrac{1}{5}$

Fraction names are like racing

Fractions are named similarly to places in a race. Use this information to help you answer the questions below:

The cars below are having a race. Car number one crossed the finish line in first place.
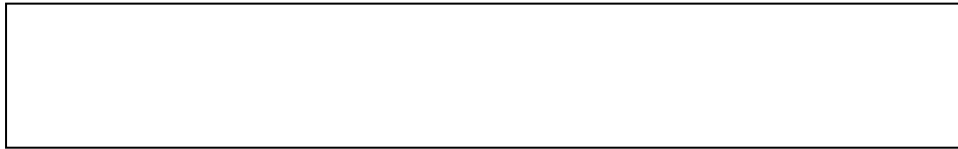Car number two came in second place.
What place did car number three come in? _____
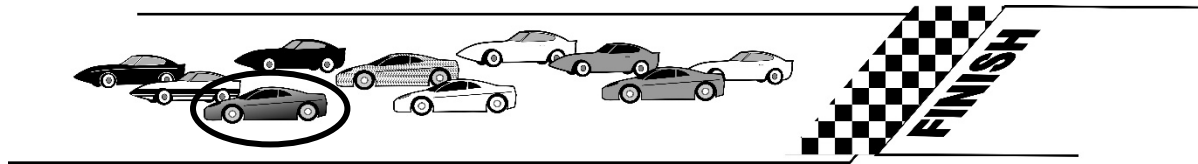
This is the **same word** as that used for when one whole is broken into three fair parts.

What would one of these parts be called? _____

Divide the whole rectangle below into three fair parts. Write the name of each part on your picture.

What place would car number five come in? _____

This is the same word as that used for when one whole is broken into five fair parts.

What would one of these parts be called? _____

Divide the rectangle below into five fair parts. Write the name of each part on the picture
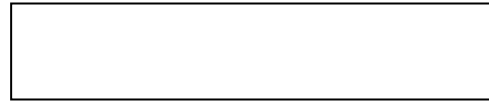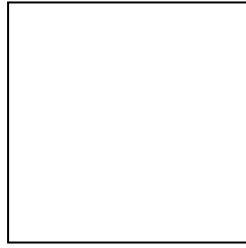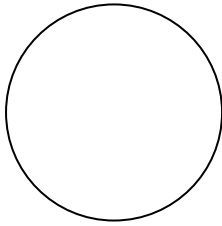
If a shape was broken into 7 pieces, what do you think each would be called? _____
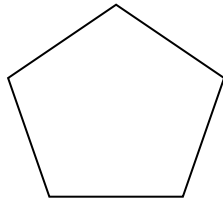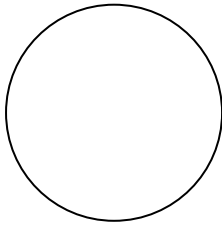
Explain why and draw a picture to show what it would look like:
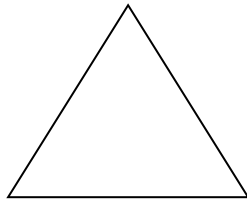
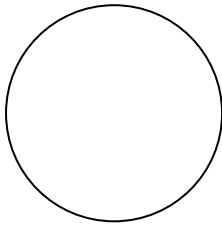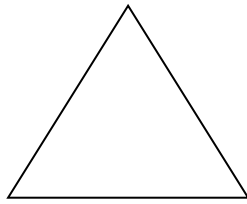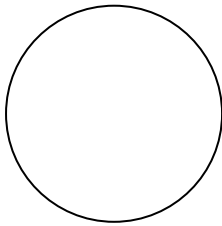***Draw the following fractions onto the shapes below:***

Draw halves:

Draw fifths:

Draw thirds:

Draw fourths:

Why are the fifths smaller than the thirds?

Extension:
Colour in two parts out of each shape. Guess what the name and symbol for each of your fractions is and write it in the space below:
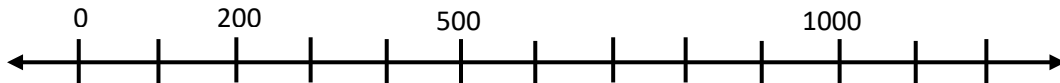
Interleaved practice

Number:

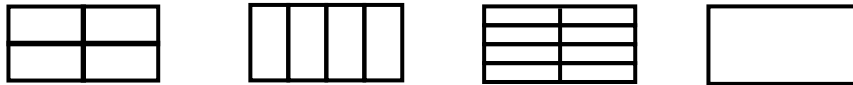1. 5 x __ = 30 Show how you worked it out.

2. Circle the numbers that are even and explain why they are even?

    25   62   80   31   44   92   87

3. Show where these numbers would go on the number line: **250   675   920**

    0   200   500   1000

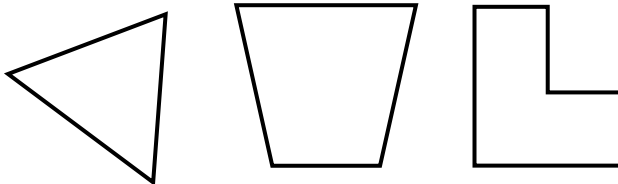4. Colour in 3 quarters of each of these rectangles.

5. What change would I get from $20.00 if I spent $14.30.
    Work out the answer and then draw the money.

Measurement/Geometry:

6. Are these shapes symmetrical? Explain your
    answers.

7. Add the following to the shopping centre
    plan and label them:
    - A bus stop in front of the seating
    - A post office close to the exit
    - A sandwich bar in a suitable
      position
    - A butcher opposite the
      supermarket

8. What time is it? Draw the clock to show.

Eatery
Supermarket
Department
store
Seating
To car park
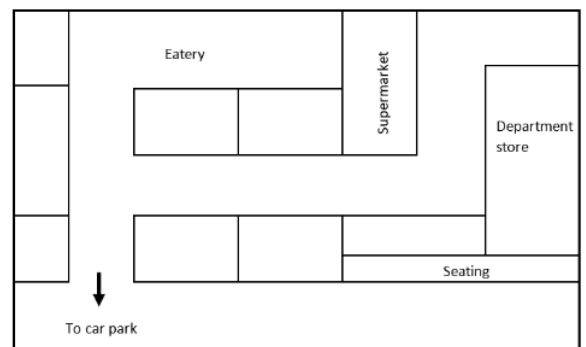
Chance/Data:

I am going to use this spinner to play a colour game.
List all of the possible results of my spins.
Which colour am I least likely to spin?

Friday: Connecting and Generalising Lesson

Fractions are not just shapes

The following picture shows 30 cupcakes. Your job is to work out what fractions you could make with the cupcakes without having to cut any of them into pieces. Making thirtieths doesn't count for this question. Use the following page to circle each different fraction that you find and explain what it is. You need to find at least 4 fractions, but there are 6 possible ones to find without cutting the cakes.
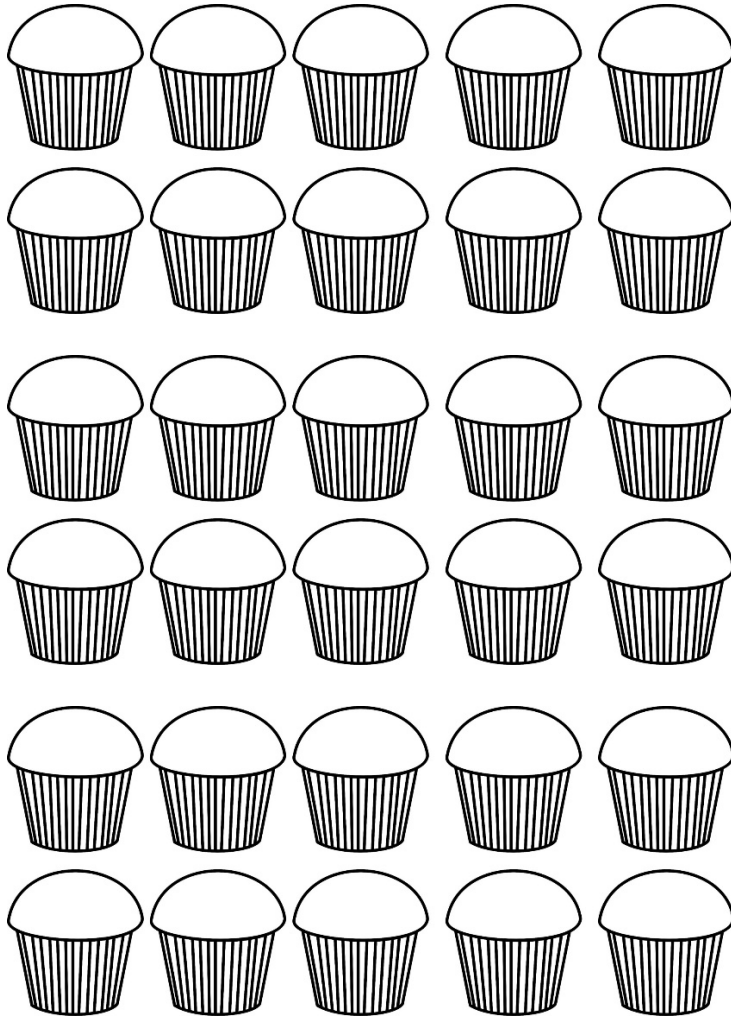
Circle the fractions you find and write the fractions in symbols or numbers (e.g. ½)