



# Adding multiples of 10

- Start at 216 and add 30.
- Keep adding 30 and recording the numbers you arrive at.
- Can you see any patterns? Describe them.
- Does the pattern in the tens and ones column repeat? How long does it take before 1 section is repeated?
- Now start on 216 and add 40 each time. What do you notice?
- Compare the two patterns.
- Does the pattern in the tens and ones column repeat? How long does it take before 1 section is repeated?
- Add other multiples of 10 (e.g. 20, 50, 60) to 216 and compare results.

## You need:

- pencil and paper



Please help your child by reading the instructions and doing the activity together.

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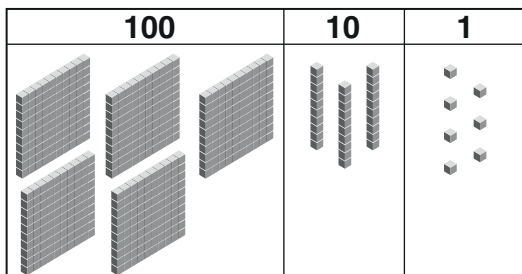


# Add and subtract hundreds, tens and ones

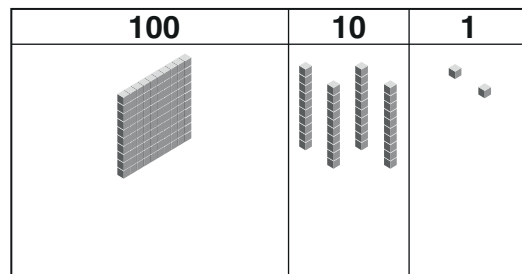
- Start with 537. Draw a representation of it on the paper using Base 10 pictures.
- You must reach the target number of 142 by adding or subtracting hundreds or tens or ones. How many steps does it take you to reach 142?

## You need:

- pencil and paper



537, subtract 400, add 10, subtract 5 and reach the target in 3 steps.



142

- Does it always take the same number of steps?
- Try different 3-digit start numbers that are larger than 500. Count the number of steps needed to reach 142.
- What do you discover?
- If the 3-digit start number was less than 500, would it take fewer steps?

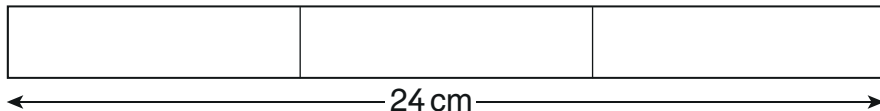


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# Comparing unit and non-unit fractions

- Cut some paper strips each measuring 24 cm in length and 2 cm wide.
- Take 1 strip and draw lines on it to divide it into 3 equal parts.



- How long is  $\frac{1}{3}$  of the strip? How long is  $\frac{2}{3}$  of the strip?
- Take a second strip. This time divide it into 4 equal parts.
- Calculate the length of  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of the strip.
- Repeat for a strip divided into 6 equal parts. Find the length of  $\frac{1}{6}$ ,  $\frac{2}{6}$ ,  $\frac{3}{6}$ ,  $\frac{4}{6}$  and  $\frac{5}{6}$  of the strip.
- Repeat for a strip divided into 8 equal parts. Find the length of  $\frac{1}{8}$ ,  $\frac{2}{8}$ ,  $\frac{3}{8}$ ,  $\frac{4}{8}$ ,  $\frac{5}{8}$ ,  $\frac{6}{8}$  and  $\frac{7}{8}$  of the strip.
- Look at your results. Can you see any number patterns? Explain them.

## You need:

- ruler
- scissors
- pencil and paper

Can you see any equivalent fractions where the strip length in centimetres is the same?



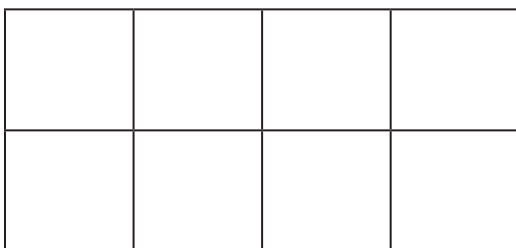
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# Shading fractions of a rectangle

- Draw a rectangle on the squared paper. It should be made up of 8 small squares in a  $4 \times 2$  arrangement.



- Shade  $\frac{1}{8}$  of the rectangle in 1 colour.
- Draw more rectangles. Find different ways to shade  $\frac{1}{8}$  of the rectangle. You may only colour whole squares. How many different ways are there?
- Now find different ways to shade  $\frac{2}{8}$  of the same rectangle shape.
- Will there be a greater number of ways? Is it possible to find them all?

## You need:

- squared paper
- coloured pencils
- ruler
- pencil and paper

If you wanted to find all the ways to shade  $\frac{6}{8}$ , could you use some of your results so far to help you?



Please help your child by reading the instructions and doing the activity together.



# Fraction puzzle

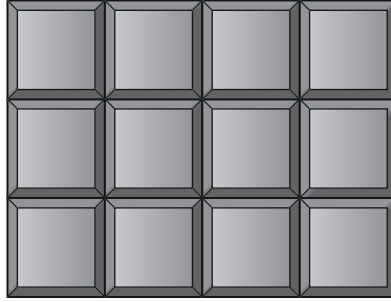
Jack has a chocolate bar made of 12 pieces.

He shares it with his friends.

He gives  $\frac{1}{4}$  to Annabelle.

He gives  $\frac{1}{6}$  to Freddie.

He gives  $\frac{1}{3}$  to Kapil.



## You need:

- pencil and paper

- How many pieces does he give to each person?
- What fraction of the whole bar does he have left? How many pieces is that?
- When Jack gets home he gives 1 of the remaining pieces to Mum. He eats the rest himself. What fraction of the original bar does he actually eat?



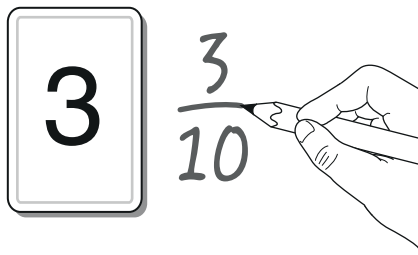
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# Adding tenths to make 1 whole

- The aim of the game is to create pairs of 'tenth' fractions which add to a total of 1, e.g.  $\frac{3}{10} + \frac{7}{10} = 1$ .
- Take turns to pick a digit card. The number picked is the numerator in a tenth fraction.
- Write the fraction.
- Keep picking cards and writing tenth fractions.
- Look out for pairs of fractions that add to a total of 1, e.g.  $\frac{3}{10}$  and  $\frac{7}{10}$ .
- When you find a pair like this, join them on your paper. Each fraction can only be used once in a pair.
- The winner is the first to make all the possible pairs which total 1.



## You need:

- digit cards 1–9 (2 sets)
- pencil and paper
- a partner



Please help your child by reading the instructions and doing the activity together.