

Using a calculator

Name

What's the divisor?

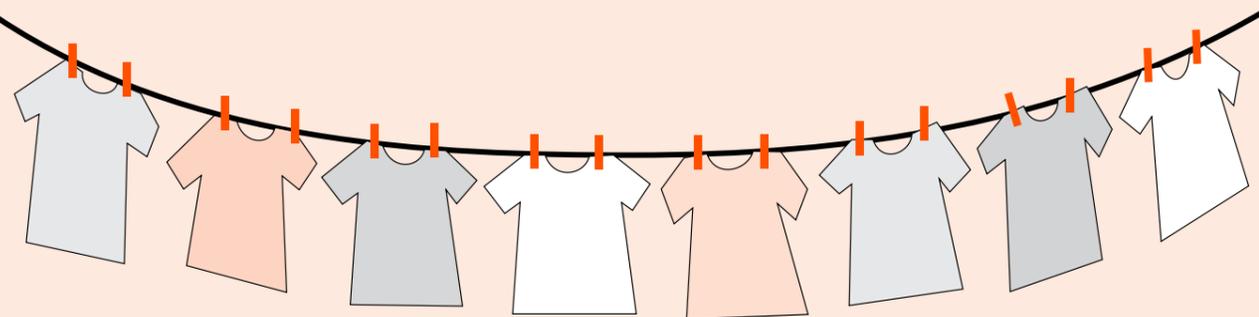
Claire was dividing 1 by different numbers.
Here are her results:

$$0.5 = \frac{1}{\square} \quad 0.125 = \frac{1}{\square} \quad 0.11111 \dots = \frac{1}{\square} \quad 0.05 = \frac{1}{\square}$$

$$0.1 = \frac{1}{\square} \quad 0.25 = \frac{1}{\square} \quad 0.08333 \dots = \frac{1}{\square} \quad 0.005 = \frac{1}{\square}$$

Try to find the missing numbers for each one.
Use the box below for your working out.

Now write your answers on the shirts on the washing line in order of size, smallest first.



Remember to take your homework to school to show your teacher, then you can take it home and play the games again.

The games and activities on this homework sheet will help your child practise:

- using a calculator efficiently
- developing problem solving strategies
- reasoning about numbers

These activities give you the opportunity to get involved in your child's education and give them support and encouragement. You can see for yourself the sort of things your child learns at school, while helping them with their studies.

Two-digit numbers

You need

- pencil and paper
- calculator



Claire was given a problem to solve.
Here are her answers so far:

Choose a small two-digit number 13
Express it as a sum of numbers $4 + 5 + 2 + 2 = 13$
Now multiply these numbers to find their product $4 \times 5 \times 2 \times 2 = 80$
Repeat with different sums of your chosen number.

Which set of numbers produces the maximum product?

$$10 + 3 = 13 \quad 5 + 7 + 1 = 13$$

$$10 \times 3 = 30 \quad 5 \times 7 \times 1 = 35$$

Continue where Claire left off to find the maximum product of numbers whose sum is 13

Now investigate for other small two-digit numbers. What do you notice?
Give some examples in the box below.

First to zero

a game for 2 players

You need

- pencil and paper clip
- a calculator each

Before you start

- decide which player spins the spinner
- using the digits 1 to 9, each player thinks of a seven digit number with two decimal places, for example 39231.24
- players key their numbers into their calculator

To play

- spin the spinner
- if that digit shows in your calculator display, change it to zero by subtracting the appropriate number (you may only change one digit at a time)
- if you are incorrect, keep playing with your new number but miss a turn

The winner is the first player to reach zero.

Sample game

Yasmina entered 18356.32 on her calculator

Amir entered 64291.85 on his calculator

First round:

They spun a 3 and Yasmina entered - 300 to get 18056.32. Amir did nothing.

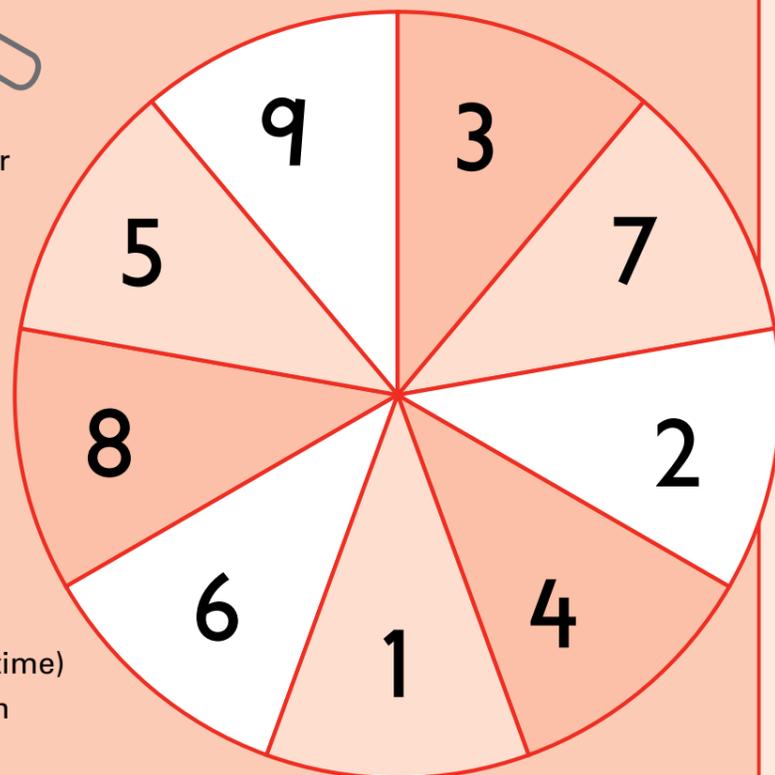
Second round:

They spun a 5 Yasmina entered - 50 to get 18006.32, Amir entered - 0.05 on his calculator to get 64291.8

Other things to try

- Spin the spinner to get a digit to eliminate.
- Make that digit zero by **adding** a number of your choice. For example, with 18356.92 you would eliminate the 3 by entering + 700 to get 19056.92
- The game ends when all but one of your digits are zero.

Remember to read the instructions before you play the game



Guess the calculation

a game for 2 players

You need

- 0-9 number cards
- paper and pencil

Before you start

- shuffle the cards and put them face down in a pile

Take turns to

- turn over four cards
- make a calculation using all four digit cards and tell the other player the answer

EXTRA RULE: if a 2 is turned over, it stands for 'to the power of 2' for example 7^2

- the other player now tries to get the same answer using the four digits

Points:

Same answer but different calculation = 1 point

Same answer, same calculation = 2 points

The winner is the player with the most points after three rounds.

Sample game

Alifa turns over 3 9 4 1 and does the calculation $3 \times 9 - 14 = 13$

Luke guesses the calculation is $9 \times 3 - 14$ and gets 2 points

(9×3 and 3×9 are counted as the same calculation)

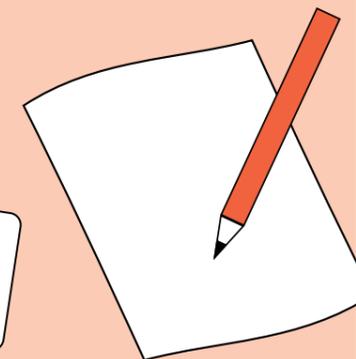
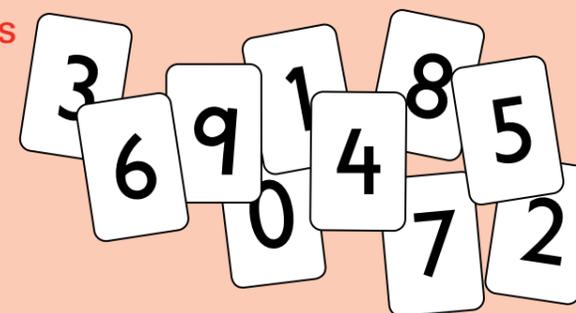
I played the games

with _____

Signed _____

Other things to try

- Both players try to make a calculation as close to 50 as possible using the four digits. Your score is the difference between your answer and 50. Play three rounds. The winner is the player with the lowest score.
- Play as above, but this time make the target number 0.5



Remember: you can use brackets and powers!