

Learning at Home Activities: Mathematics

OPEN-ENDED MATHS - PLACE VALUE

What you will need:

- paper and pen.

What to do: These questions have more than one answer. See how many you can find! Record your answers to these questions as you explore four and five-digit numbers:

1. Write some 4 and 5 digit numbers with 7 in the hundreds place. How many 4 or 5 digit numbers can you write with a 7 in the hundreds place?
2. How many different numbers can you make using the digits 1, 2, 3 and 4? You can only use each digit once in each number. Can you be sure you have written them all?
3. What numbers can you make using 1, 0, 2, 6, 8 and 5? What is the largest number you can make using all these digits? What is the smallest number you can make?

What learning is happening: In this activity you are using place value to explore four and five-digit numbers. You might be using place value to explain number patterns. You are developing your mathematical skills of understanding, problem-solving and reasoning. You are thinking more deeply to respond to a question where there is not just one answer to be found.

OPEN-ENDED MATHS - OPERATIONS

The word 'operations' in maths means addition, subtraction, multiplication and division. This activity provides opportunities to practise all these operations.

What you will need:

- paper and pen
- a calculator (optional).

What to do: These questions have more than one answer. See how many you can find!

1. I have some marbles. I give some away to my friends and have 12 left.
 - How many marbles did I have at the start?
 - How many did I give away?
2. Using all of the digits 9, 8, 7, 6, 5, 4, 3, 2, 1 once each, and any operations you like.
 - What numbers can you make?
 - What is the biggest number you can make?
 - What is the smallest?
 - Make every number from 1-20.
3. Eighty-four children are arranged into teams with the same number in each team.
 - How many teams could there be, and how many children might there be in each team?
 - Find three different answers and then explain your thinking to someone in your house.
4. Using four 4s and any operation, how many different answers can you make?

Taking the learning further:

5. Using a variety of operations, and a fixed set of numbers.
 - Is it possible to make all numbers between 1 and 100? For example, you choose all the numbers in today's date.

Learning at Home Activities: Mathematics

MONEY, MONEY, MONEY!

What you will need:

- Coins and notes
- Catalogue (if you have one)
- Pen and paper for recording answers

What to do: Remember that these questions have more than one answer. See how many you can find!

1. I bought an item at a shop and got 35 cents change. What did I buy and how much did it cost?
2. How could I spend exactly \$20 at the supermarket? Use a catalogue and a calculator if you have one.
3. In my pocket I have \$36. What notes and coins might I have?
4. My friends and I shared an amount of money equally between us. We each got \$1.20. How much money was there and how many friends might I have? Do a drawing to illustrate your calculations.
5. If one of the notes that we use today was to be changed to a coin, which one would you choose and why?
6. How many different ways can you make up \$1 using different coins? Be sure to record your answers on the paper.
7. What is the most amount of money that you can have, using just 6 of your coins? Can you write this down as an equation?

TIME

What you will need:

- Digital and analogue clocks around your house
- A stopwatch (or timer on the phone)
- A calendar
- Pen and paper for recording your answers

What to do: Remember that these activities and questions have more than one answer. See how many you can find!

1. Think about the following question: How do we measure time? Ask some of the people in your house for their ideas about this. Make a table to list everybody's answers.
2. You have 30 seconds to do exactly three things. What three things can you do? Could you time someone else in your family to see how long it takes them to do the same three things?
3. What is something you can do exactly 100 times in one minute? How long does it take the other members of your family to do the same 100 things as you?
4. What are some times when the digits on a digital clock make a pattern? (e.g. 12:34)
5. I am a month with 31 days. Which month might I be?
6. The time is now 20 minutes after 3 o'clock. Show this time in as many ways as you can (you can draw analogue and digital clocks as well as use numbers and words).

Learning at Home Activities: Mathematics

ACTIVITIES WITH A SHOPPING CATALOGUE

What you will need:

- A shopping catalogue
- Pen and paper to record your calculations
- Calculator (optional)

What to do:

1. Compile a shopping list from the catalogue and calculate how much it would cost to purchase all the items on your list. ESTIMATE the total first by rounding the prices to the nearest whole dollar or nearest 10 dollars.
2. Plan a birthday party for ten children. Using items from the catalogue, how much would it cost to buy enough food and drinks and decorations? Can you stick to a budget of \$100?
3. How many essential food items can you buy for \$100?
4. Find a recipe for a meal for your family. Select the ingredients from the catalogue and calculate how much it would cost to purchase all the items on your list.