

Maths about me: a start-of-term icebreaker for IGCSE and GCSE

IGCSE Math Revision · IGCSE and GCSE (Higher and Extended) · Student sheet

Name _____

Class _____

Date _____

No calculator needed.

Starter (5 minutes)

1. I am a two-digit prime. My digits add up to 10 and my tens digit is bigger than my units digit. Who am I?
2. I am a square number between 50 and 100, and I am 1 more than a multiple of 8. Who am I?
3. I am a multiple of 6 and of 15, and I am less than 50. Who am I?
4. I am a cube number bigger than 1. Add 1 to me and you get a square number. Who am I?

Main activity (35 minutes)

Task A: Maths about me

Work through Sam's made-up numbers first. Then do the same with your own birthday and favourite numbers on paper.

- a. Sam's birthday is the 24th, and Sam's house number is 132. Write 24 and 132 as products of prime factors.
- b. Find the HCF and the LCM of 24 and 132.
- c. Sam was born in month 9, so the birthday digits are 2, 4, 0 and 9. How many 4-digit numbers use each of these digits once? How many of them are even?

Task B: 'Who am I?' in pairs

Solve these with a partner. Then each write a riddle of your own with exactly one answer and swap.

- a. I am between 100 and 200. I am a multiple of 7 and of 11, and my digits add up to 10. Who am I?
- b. I am the smallest number bigger than 1 that leaves remainder 1 when divided by 2, 3, 4, 5 or 6. Who am I?
- c. I am a two-digit number. Add me to the number with my digits reversed and you get 121. My two digits differ by 5. Who could I be?

Task C: Four 4s

Use exactly four 4s with $+$, $-$, $\times$, $\div$ and brackets to make each target. You may also join two 4s to make 44. Other answers are possible.

- a. Make 2.
- b. Make 7.
- c. Make 9.
- d. Make 20.

Extension

1. Make 15 and 17 with four 4s.
2. Find every two-digit number that is 4 times the sum of its digits.