

Summer maths puzzle pack 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. Find the next number: 1, 4, 9, 16, ...
2. A brick weighs 1 kg plus half a brick. How much does a brick weigh?
3. I think of a number, double it and add 7. The answer is 31. What was my number?

Main activity (35 minutes)

Task A: Number puzzles

Puzzles about whole numbers.

- a. The numbers 1 to 9 go in a 3×3 grid so that every row, column and diagonal has the same total. What must that total be?
- b. In that magic square 5 is in the centre and 2 is in the top-left corner. Which number goes in the bottom-right corner?
- c. Find two consecutive whole numbers whose product is 506.

Task B: Logic puzzles

Write an equation, or try and improve.

- a. Ana is 3 times as old as her brother. In 5 years she will be twice as old as him. How old are they now?
- b. A farm has chickens and goats: 20 heads and 56 legs. How many goats are there?
- c. A snail climbs 3 m up a 10 m wall each day and slips back 2 m each night. On which day does it reach the top?

Task C: Shape and counting puzzles

Draw a diagram first.

- a. How many squares of any size are there on a 4×4 grid?
- b. A square has the same perimeter as a 9 cm by 5 cm rectangle. Which has the bigger area, and by how much?
- c. Ten friends each shake hands once with every other friend. How many handshakes is that?

Extension

1. What is the last digit of 7^{100} ?