

$$\frac{3x \times (x+1)^2}{3x^2 \times (x+1)^2} = \frac{x+1}{x}$$

# GEOMETRIC REASONING

MATHS

LEVEL 1

## Study Checklist

If you've picked up this checklist, congrats! You've begun the first step in a system of resources designed to help you through the Geometric Reasoning external. To make the most of this, we suggest you sit down, grab a pen, and mark any points that you're feeling a little unsure of. Then, create a subject audit using our template, or refer to the page numbers to find the section in our walkthrough guide to help you out!

### ANGLES AND PARALLEL LINES

- |   |   |
|---|---|
| <input type="checkbox"/> I can identify the three properties of angles [TBC]        | <input type="checkbox"/> I can identify the three properties of parallel lines [TBC]          |
| <input type="checkbox"/> I can write angle properties in shorthand [TBC]            | <input type="checkbox"/> I can write parallel line properties in shorthand [TBC]              |
| <input type="checkbox"/> I can use angle properties to solve an angle problem [TBC] | <input type="checkbox"/> I can use properties to solve problem involving parallel lines [TBC] |

### CIRCLES

- |  |   |
|--|---|
| <input type="checkbox"/> I can define and identify what an arc, chord, radius, and diameter is [TBC] | <input type="checkbox"/> I can write the circle properties in shorthand [TBC]       |
| <input type="checkbox"/> I can identify the six circle properties [TBC]                              | <input type="checkbox"/> I can use these properties to solve a circle problem [TBC] |

### POLYGONS

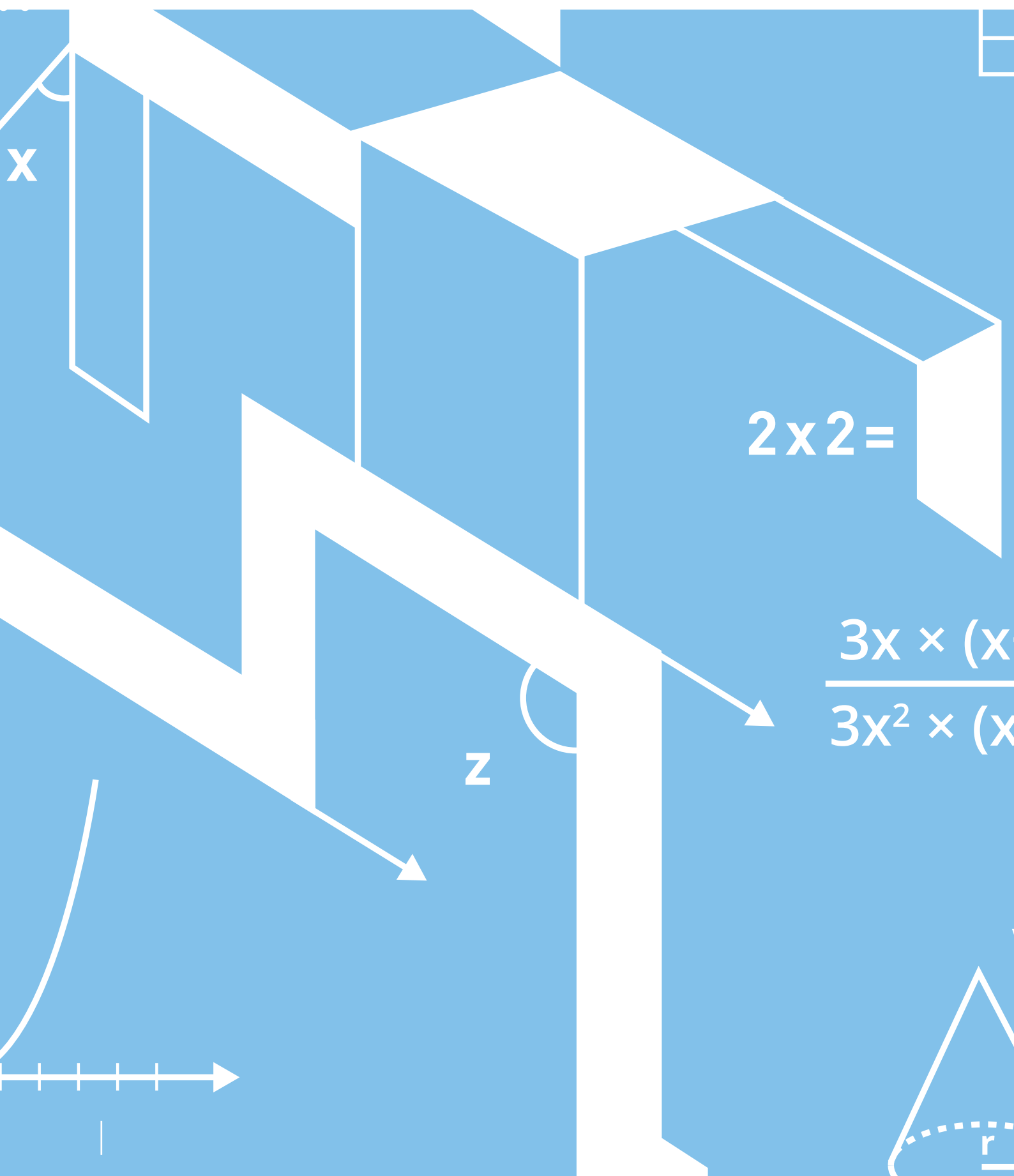
- |  |   |
|--|---|
| <input type="checkbox"/> I can identify the two polygon rules [TBC]                                      | <input type="checkbox"/> I can use my knowledge of isosceles triangles to solve problems [TBC]            |
| <input type="checkbox"/> I can find the interior angle of a polygon using two different techniques [TBC] | <input type="checkbox"/> I can explain what a similar triangle is [TBC]                                   |
| <input type="checkbox"/> I can identify the three properties of triangles                                | <input type="checkbox"/> I can define and calculate a 'scale factor' [TBC]                                |
|  | <input type="checkbox"/> I can use my knowledge of similar triangles to solve a generalised problem [TBC] |

### PYTHAGORUS' THEOREM, BEARINGS AND TRIGONOMETRY

- |   |  |
|---|--|
| <input type="checkbox"/> I can use Pythagorus' Theorem to find the length of an unknown side. [TBC] | <input type="checkbox"/> I can measure bearings in three digits from north [TBC]     |
| <input type="checkbox"/> I can name each side of a triangle according to trigonometry [TBC]         | <input type="checkbox"/> I can use my knowledge of bearings to solve a problem [TBC] |
| <input type="checkbox"/> I can use SOH, CAH, and TOA to solve trigonometry problems [TBC]           |  |

## PROOFS AND GENERALISED PROBLEMS

- I can add information to a diagram to help solve a given problem
- I can use shape properties to show geometric reasoning
- I can identify parallel lines, isosceles, and similar triangles
- I can solve problems using letters, not numbers
- I can give a generalised answer to a problem



$$2 \times 2 =$$

$$\frac{3x \times (x)}{3x^2 \times (x)}$$