# Unit 12

## Strengthen activities

**MISCONCEPTION:** **Children may struggle to recognise right angles that are oriented 'diagonally' — where neither line is horizontal or vertical. They may not be able to identify angles that are smaller or larger than a right angle.**

### Answers

Children should be able to check their estimates of angles smaller, larger or equal to a right angle with the measurer they have made.

**MISCONCEPTION:** **Children may think that an angle is a measure of the size of the space between two lines, and so may think that a given angle is larger if the lines extend further.**

### Answers

Children should be able to say which angle is smaller or larger based on the angle alone, not the line length.

**MISCONCEPTION:** **Children may assume that parallel lines must be of identical length. They may assume that any two lines which do not intersect are parallel.**

### Answers

Children should be able to recognise and describe parallel lines in different contexts.

## Deepen activities

### Answers

#### Activity 1

**a)** You do not face the same wall. You have turned the equivalent of one turn to the right.

**b)** Children's own instructions.

#### Activity 2

**a)**

| Shape | Faces | Edges | Vertices |
|---|---|---|---|
| Square-based pyramid | 5 | 8 | 5 |
| Triangle-based pyramid | 4 | 6 | 4 |
| Cube | 6 | 12 | 8 |
| Cuboid | 6 | 12 | 8 |
| Triangular prism | 5 | 9 | 6 |
| Hexagonal prism | 8 | 18 | 12 |

**b)** Children may notice that the number of faces plus vertices is two more than the number of edges.

#### Activity 3

**a)** 8 different shapes

**b)** 29 different shapes can be made