S2

CFE Level 3

Working at Home Workbook
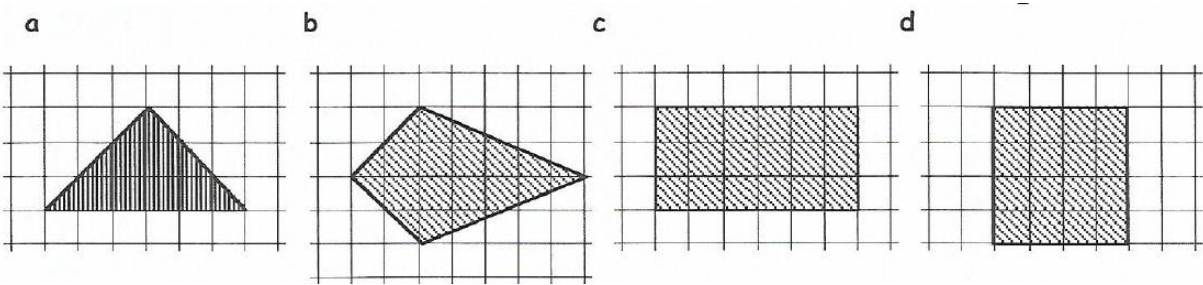
Symmetry

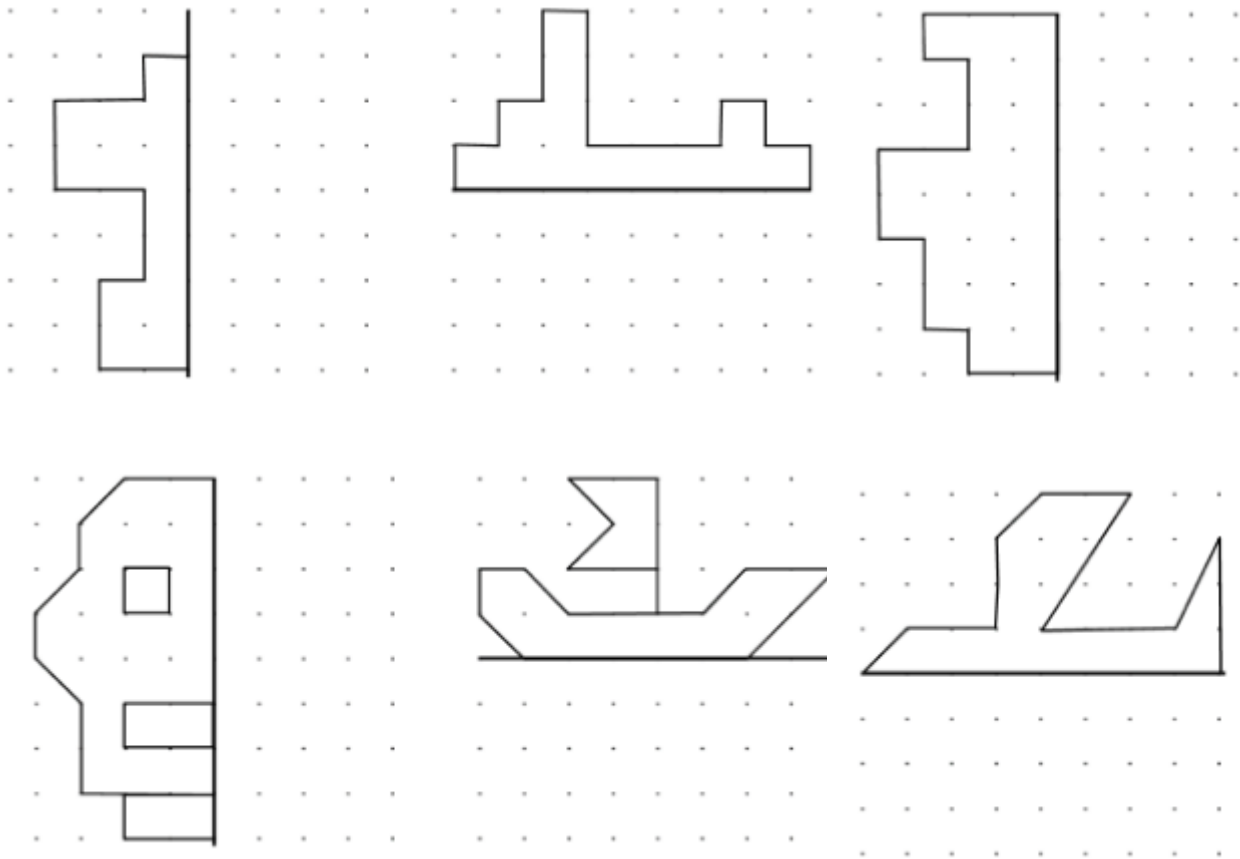| Learning Intention. To be able to - |
|---|
| Identify line symmetry and create symmetrical shapes |
| Identify rotational symmetry |
| Create a shape using turn symmetry |
| Use translation symmetry to tile a plane |

Identify line symmetry and create symmetrical shapes

Questions 1

1. Copy each of the shapes and mark all lines of symmetry:
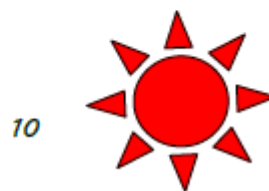
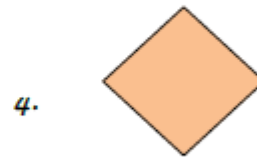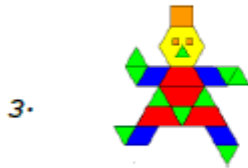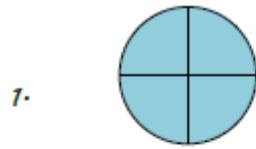a   b   c   d

2. Copy each of the diagrams and neatly draw the other half of the shape using the dotted line as a line of symmetry.
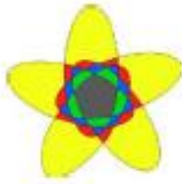
Identify rotational symmetry
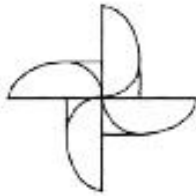
Questions 1

1. Which of the following shapes have half-turn symmetry?

1.

2.

3.

4.

5.

6.

7.

8.

9.

10

2. State what kind of turn symmetry each of the following shapes have ($\frac{1}{2}$ turn, $\frac{1}{3}$, $\frac{1}{4}$)

1.

2.

3.

4.

5.

6.

7.
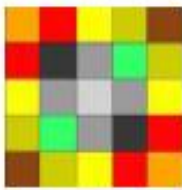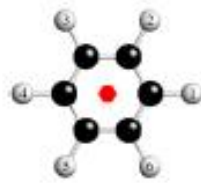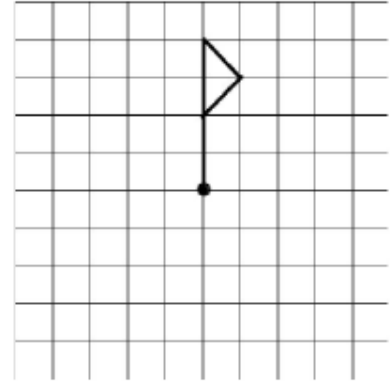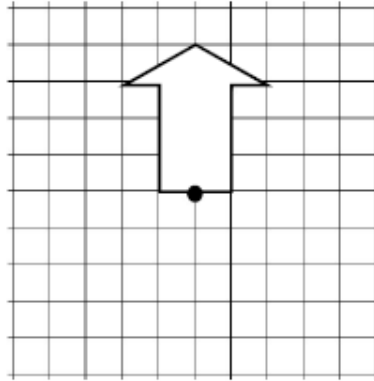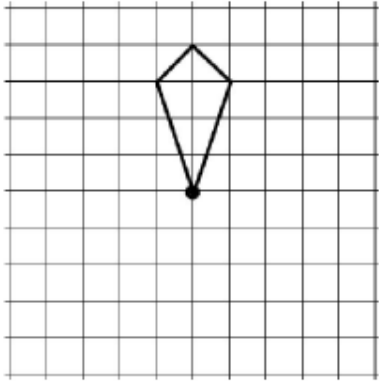
8.

9.

10

Create a shape using turn symmetry
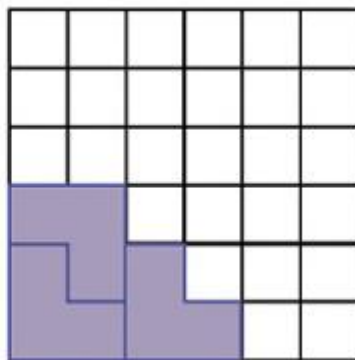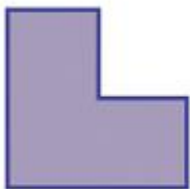
Questions 1

1. Copy each of these shapes and rotate each one by 180°, ($\frac{1}{2}$ a turn), around the circle:
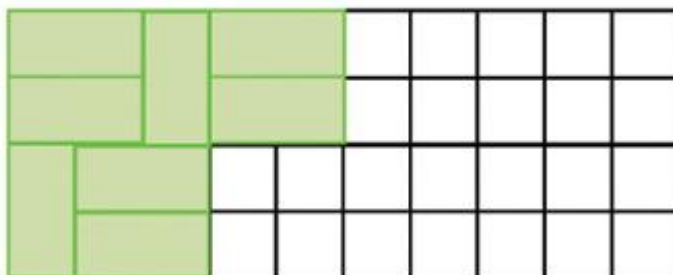
Use translation symmetry to tile a plane

Questions 1

1. Use the shape below to continue the tessellation:

2. Use the shape below to continue the tessellation:

3. Make a copy of this tile in the centre of a page and shade it. Show how to completely surround it with congruent tiles.