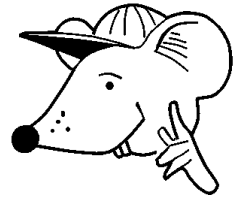# MATHEMATICS

Y6 Geometry
6740

Reflective symmetry in 2-D shapes.
Reflections and translations.

Equipment

Paper, squared or patterned paper, pencil, ruler, mirror.

MathSphere

Concepts

Children should know and be able to read, write and use the following words:

Mirror line, line of symmetry, line symmetry, symmetrical, reflect, reflection, translation, axis of symmetry, reflective symmetry.

Children should be able to test for symmetry using a mirror and by folding.

Children should be able to sketch the reflection of a simple shape in a mirror line where none or only some of the edges of the shape are parallel or perpendicular to the mirror line.

They should be able to complete a pattern using reflections in two mirror lines at right angles to each other, where the grid so formed is labelled with both positive and negative co-ordinates.

They should understand the concept of a translation (a simple slide) and be able to draw a shape after it has been translated on a set of co-ordinates.
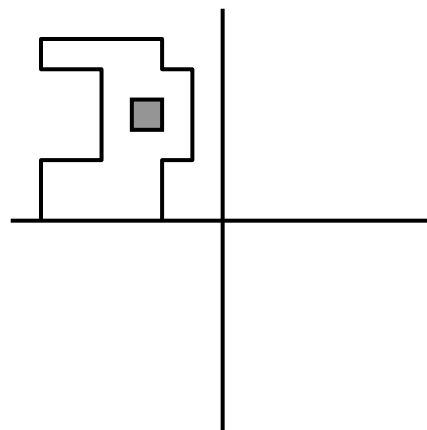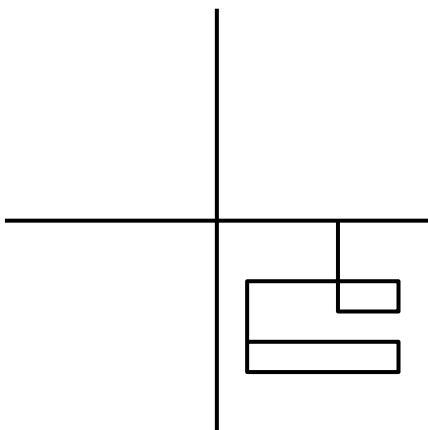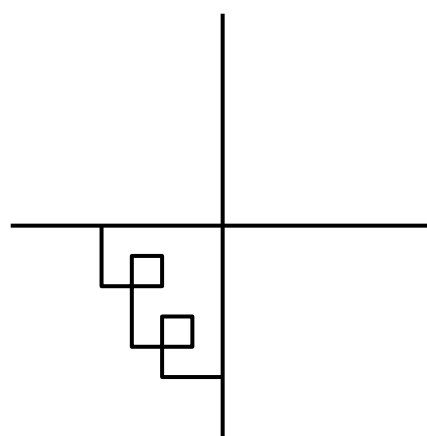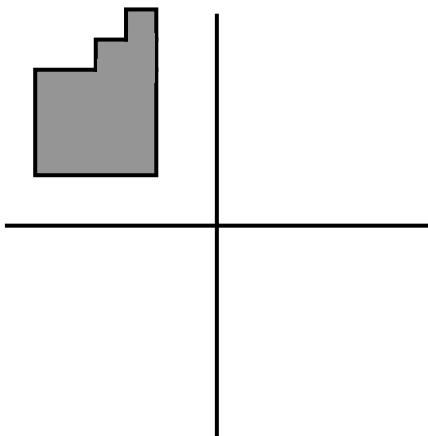
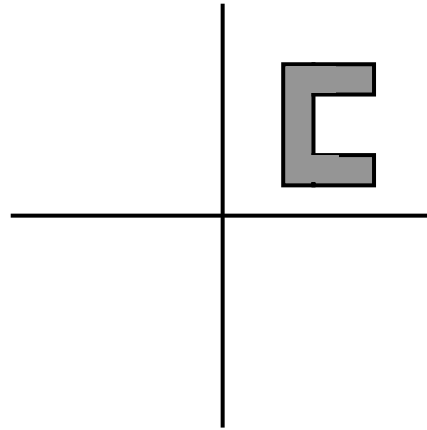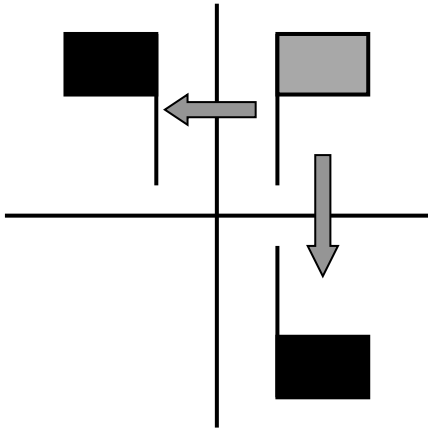**1.** Sketch the reflection of the shapes in the mirror lines.
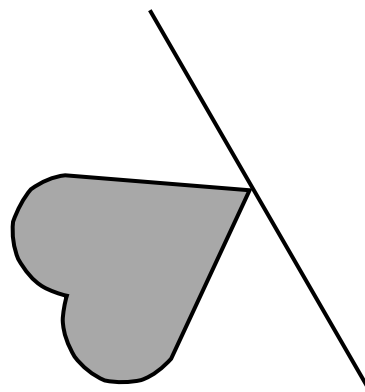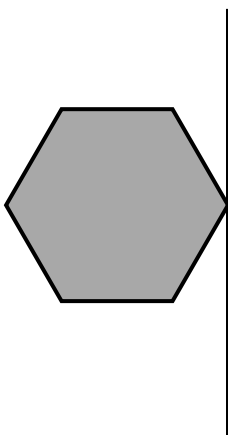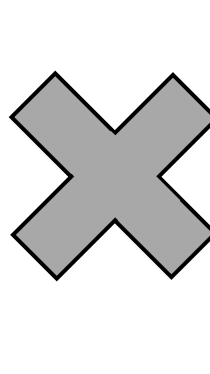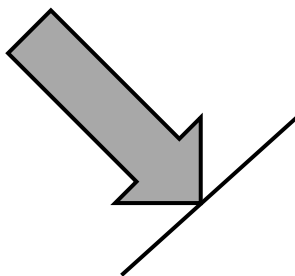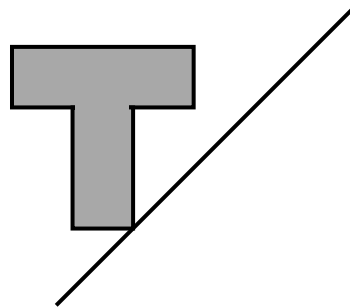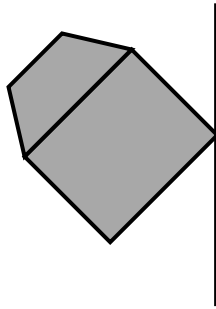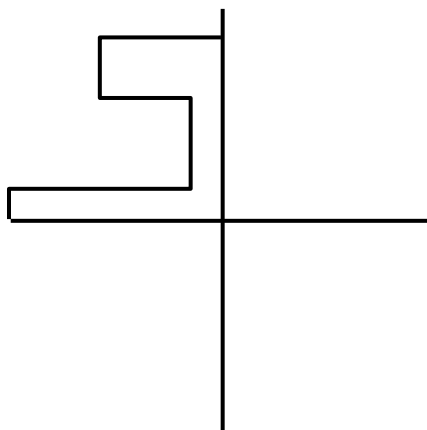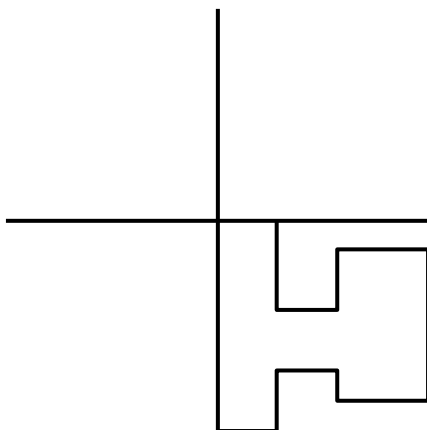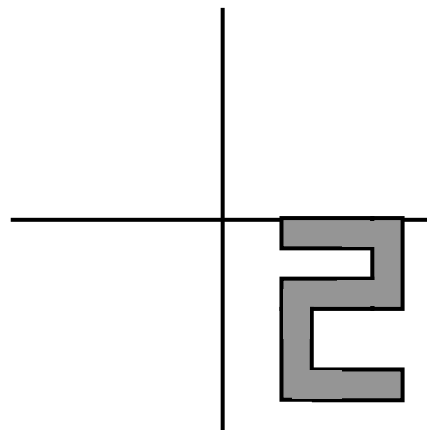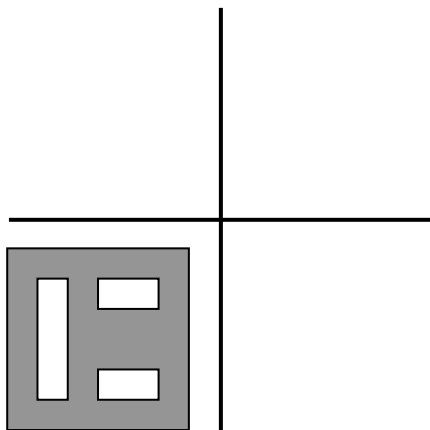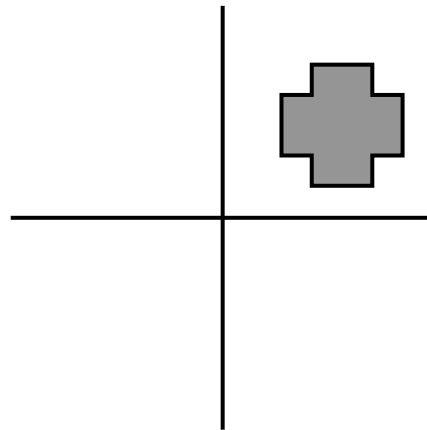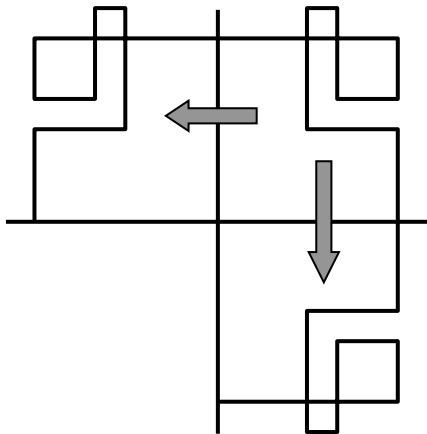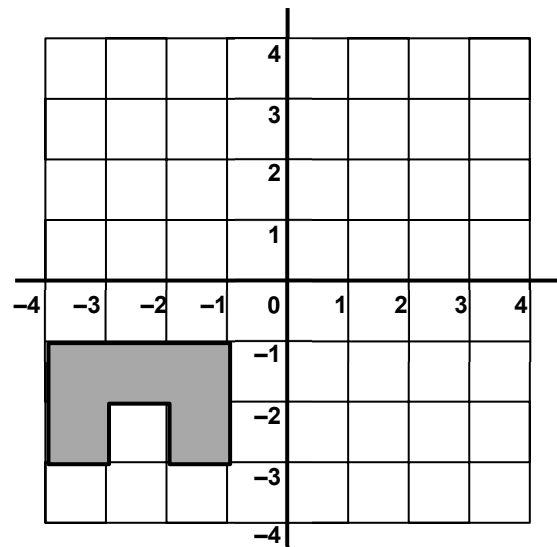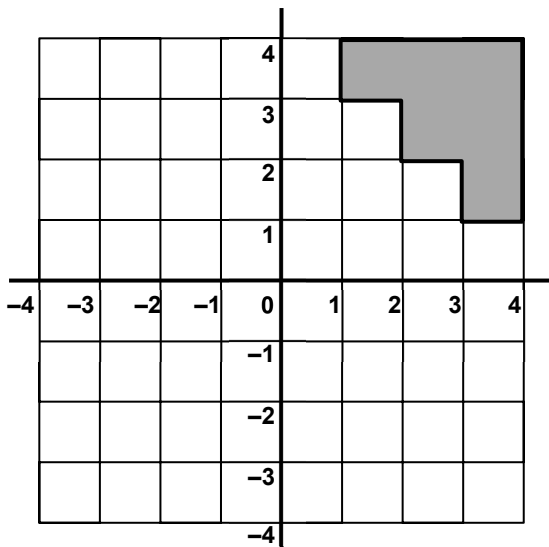
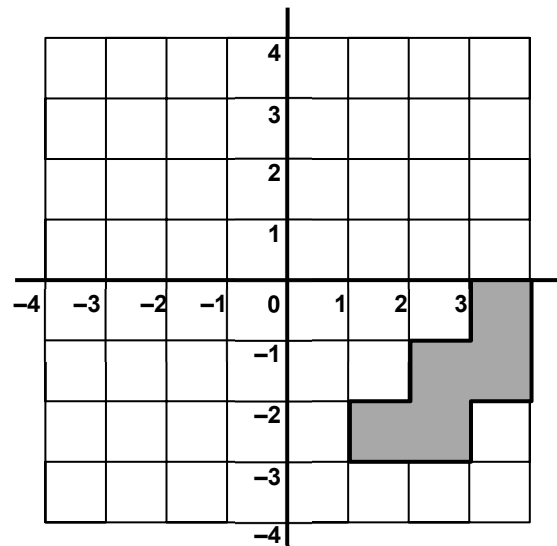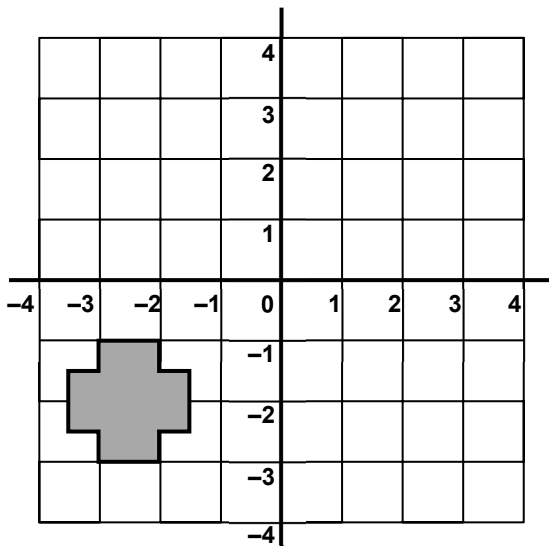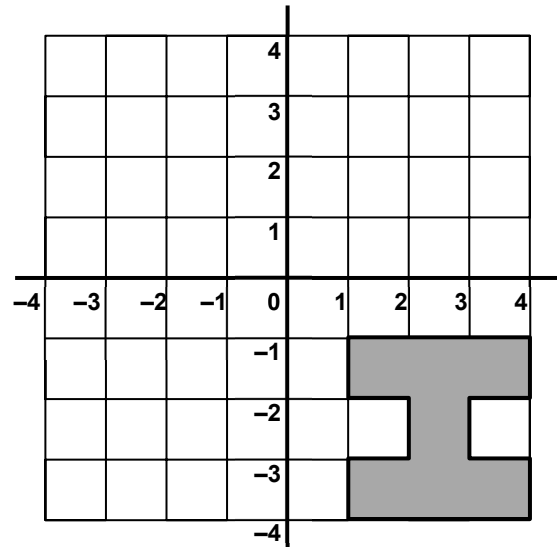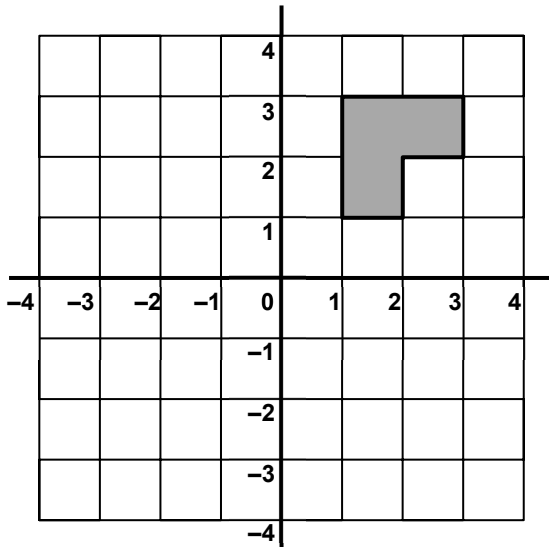**1.** Sketch the reflection of the shapes in the mirror lines.
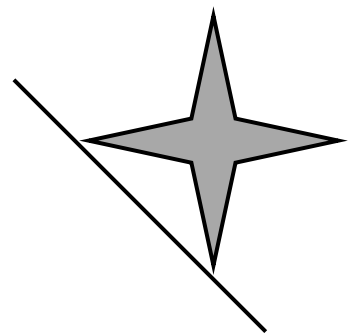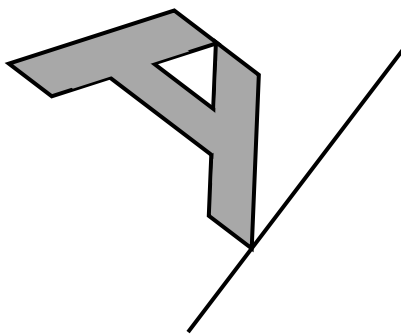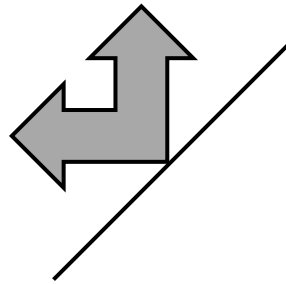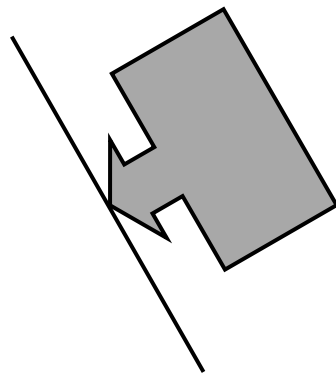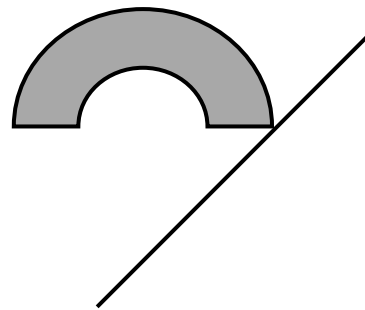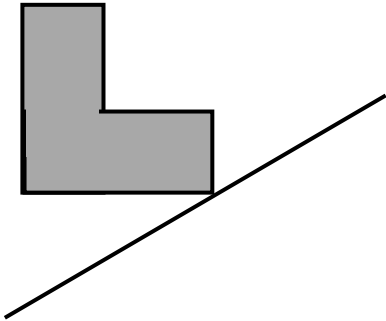
1. Reflect the following shapes in both mirror lines. The first one is done for you.

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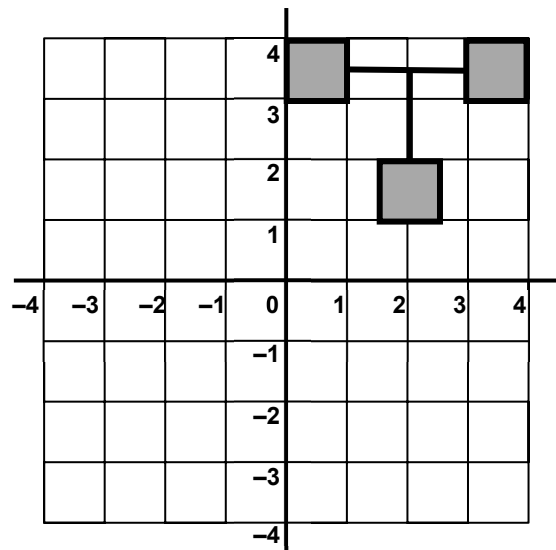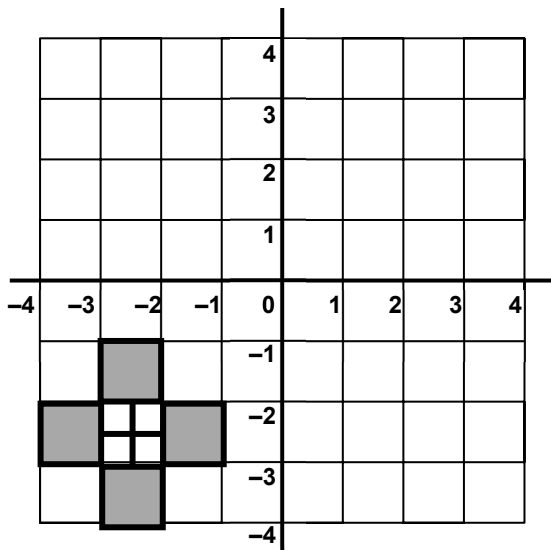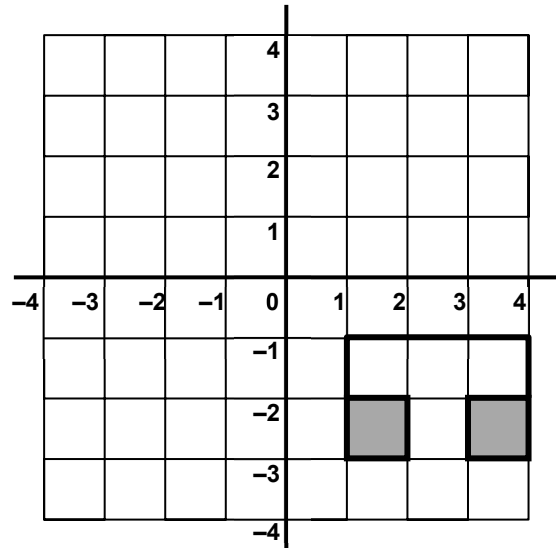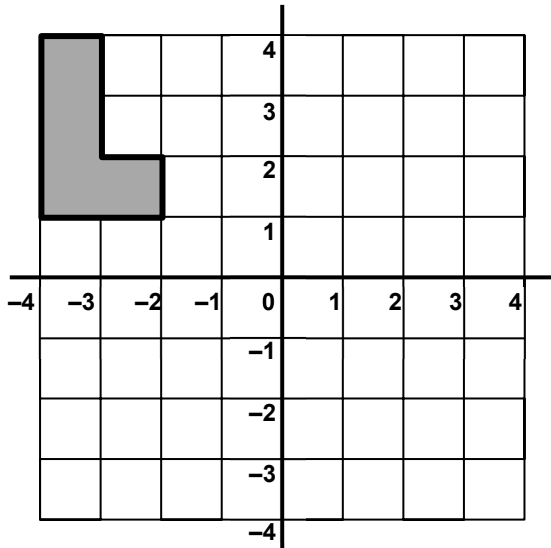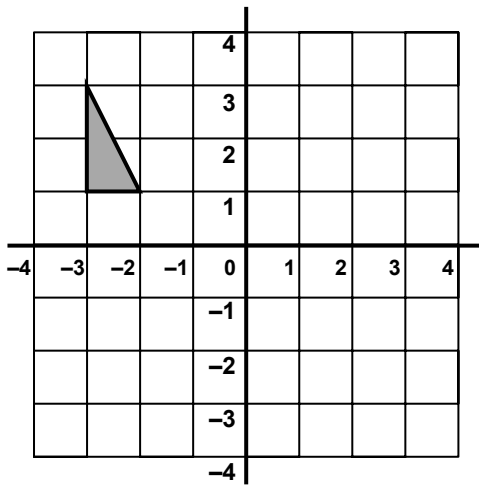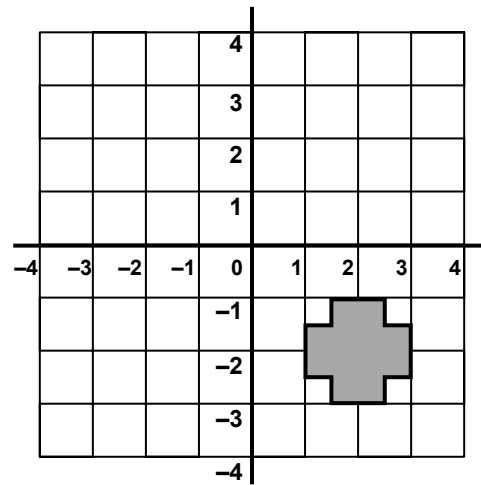
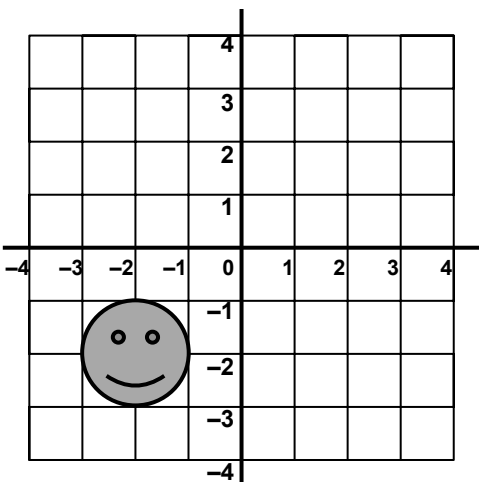**1.** Reflect the following shapes in both mirror lines.
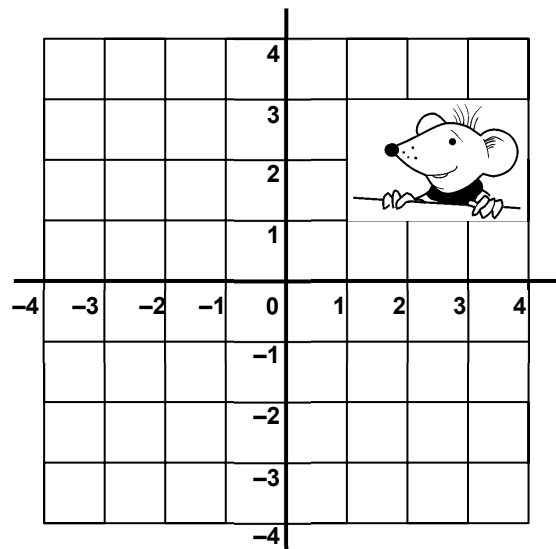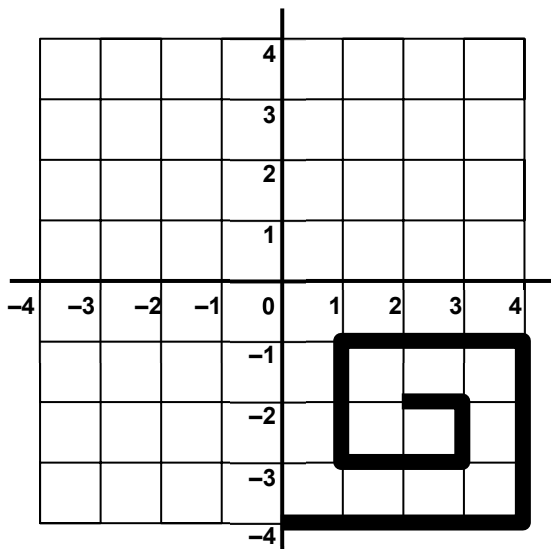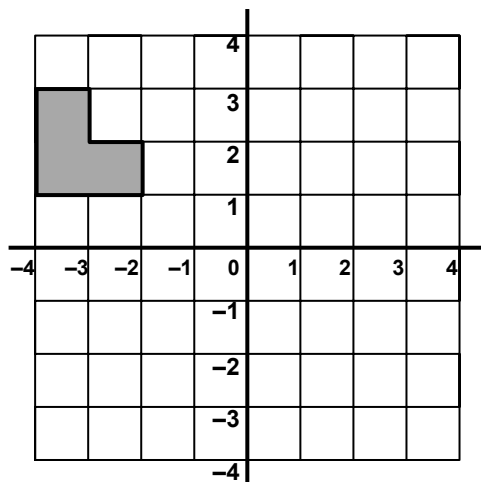
1. Translate the shapes by the amount shown:

Translate **4** units to the **right** and **4** units **down**
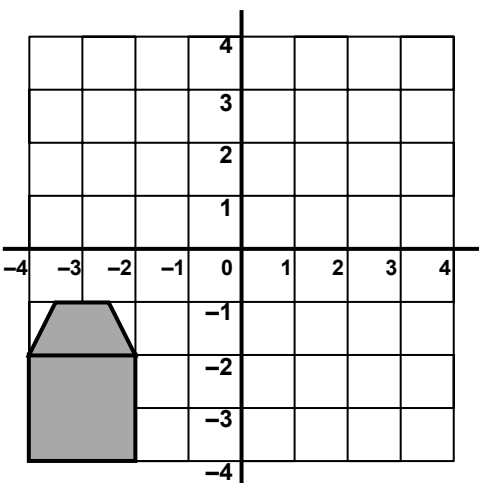
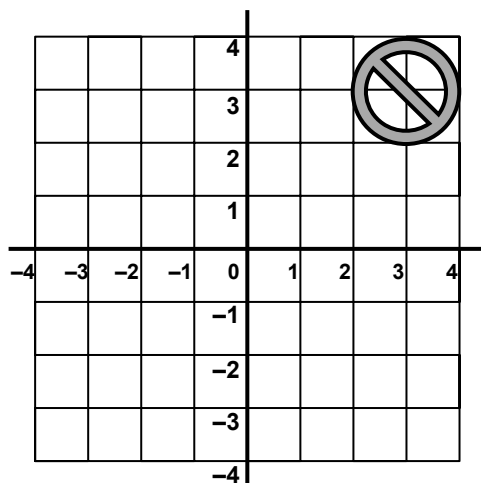Translate **5** units to the **left** and **5** units **up**

Translate **3** units to the **right** and **2** units **up**

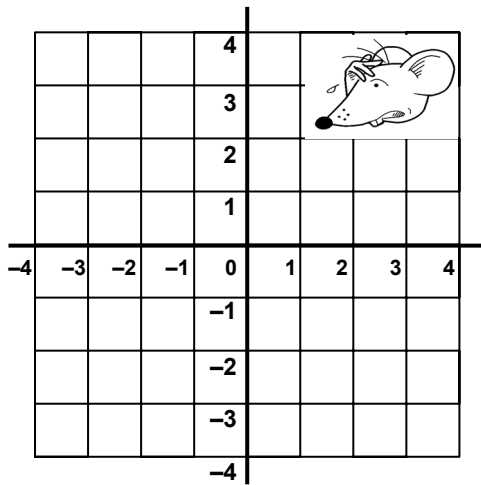Translate **5** units to the **right** and **3** units **down**

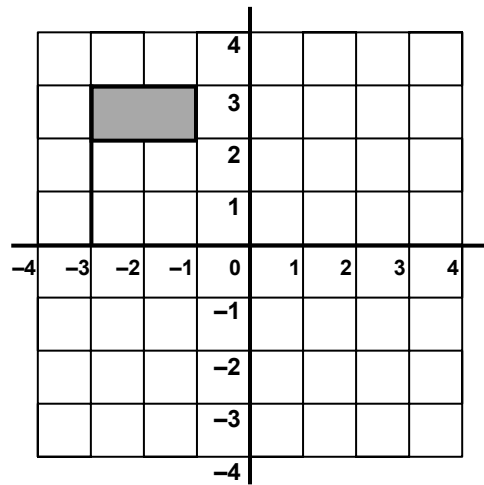Translate **4** units to the **right** and **4** units **up**

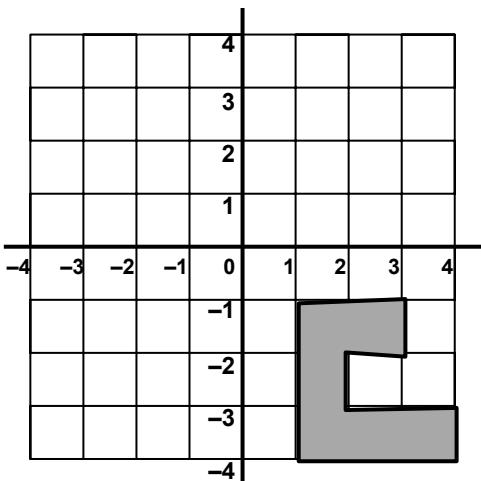Translate **4** units to the **left** and **2** units **down**

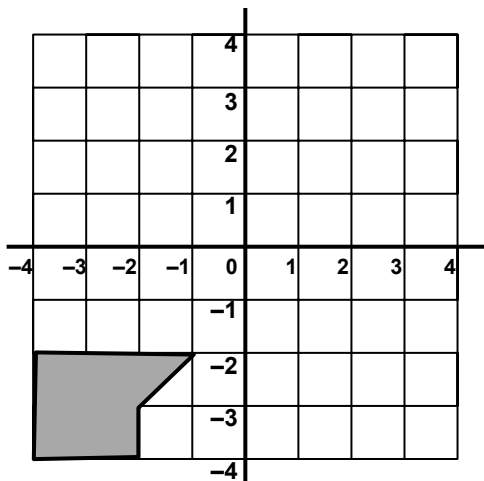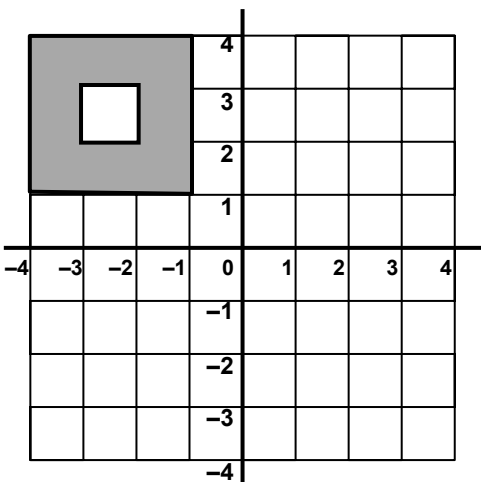**1.** Translate the shapes by the amount shown:

Translate **5** units to the **left** and **4** units **down**

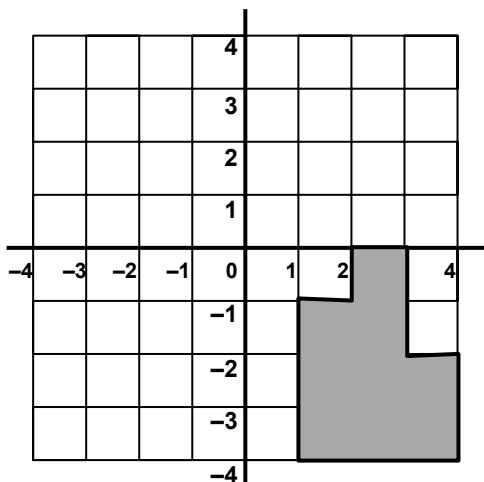Translate **3** units to the **right** and **4** units **down**

Translate **4** units to the **left** and **4** units **up**

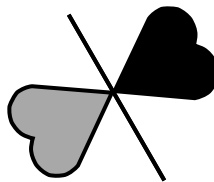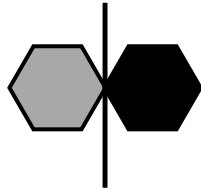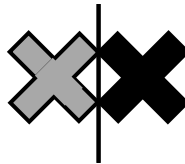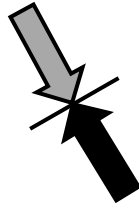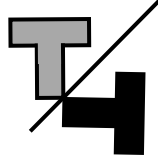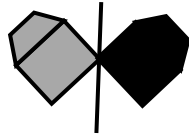Translate **3** units to the **right** and **4** units **up**
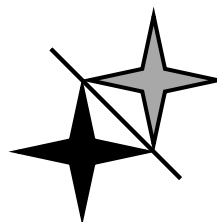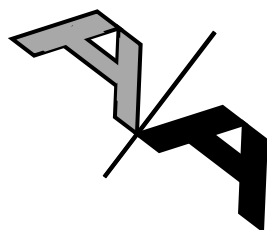
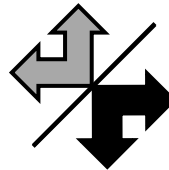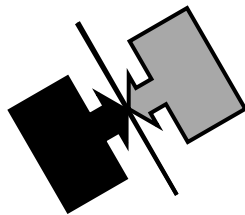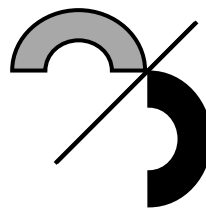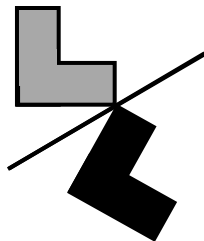Translate **4** units to the **right** and **5** units **down**

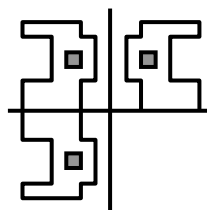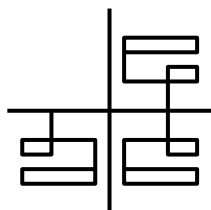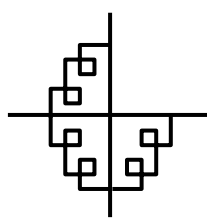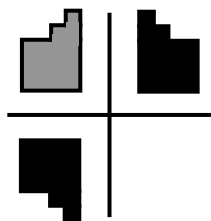Translate **3** units to the **left** and **4** units **up**

<u>Answers</u>

Page 3

Page 4

<u>Answers (Contd)</u>

Page 5
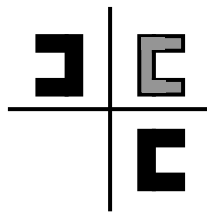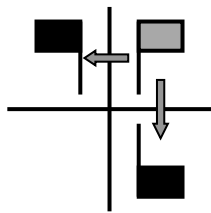
Page 6
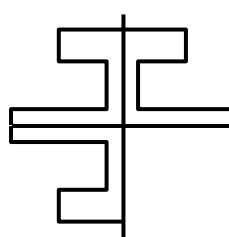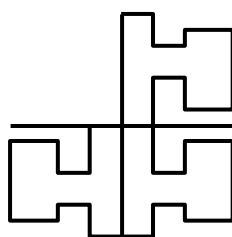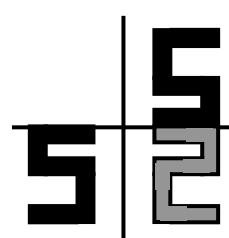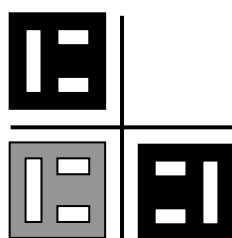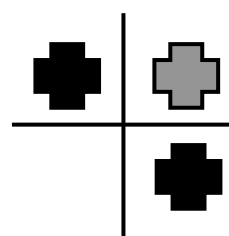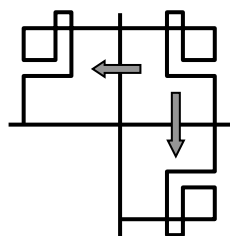
Answers (Contd)

Page 7
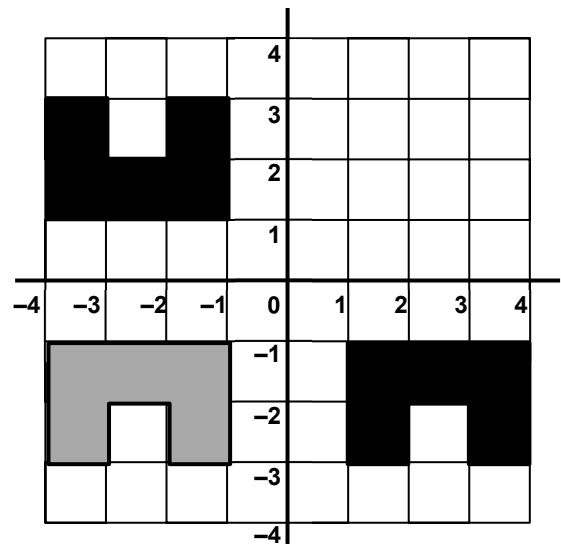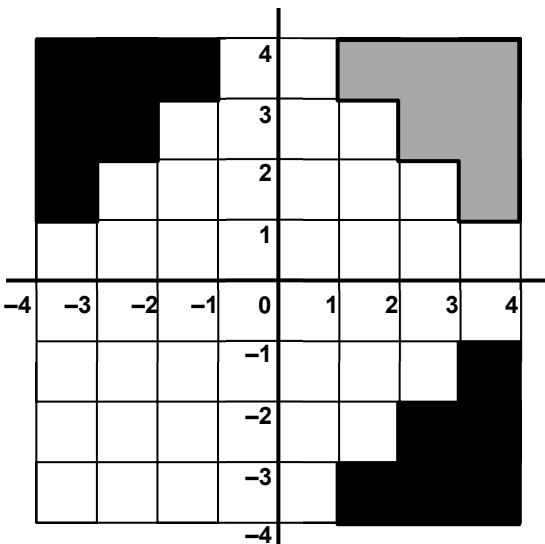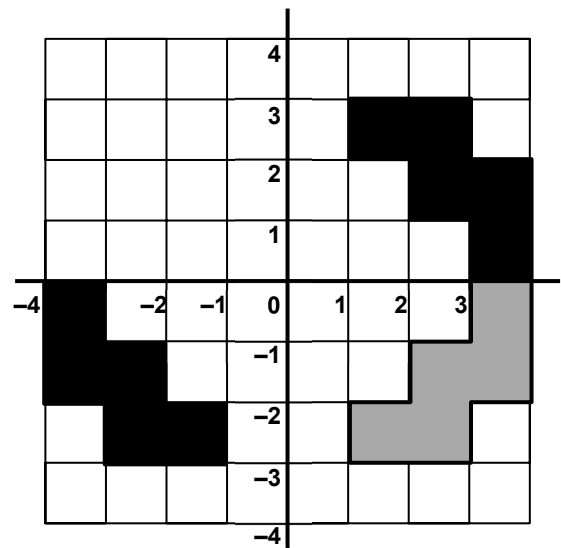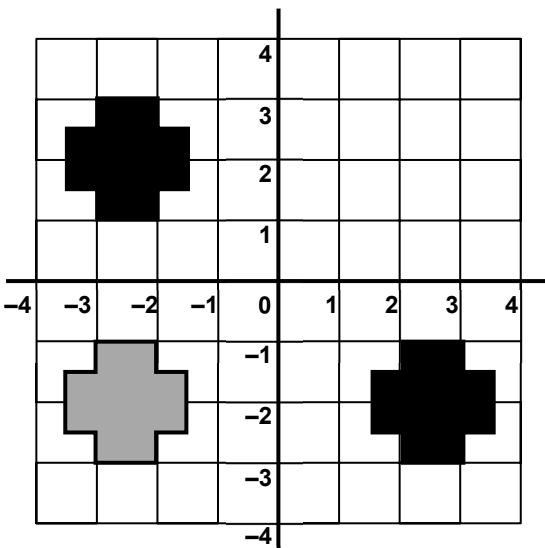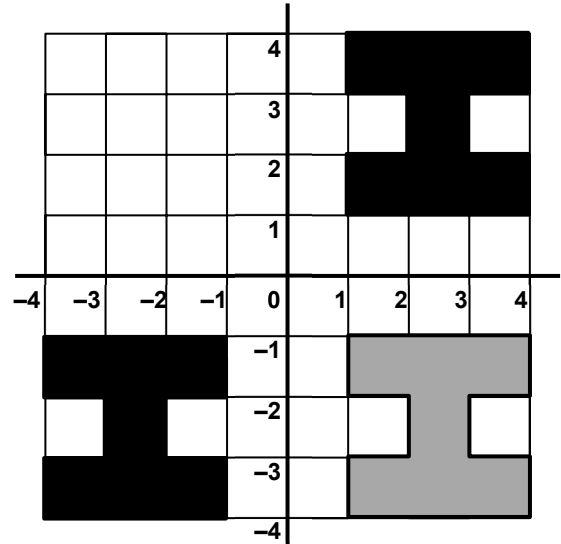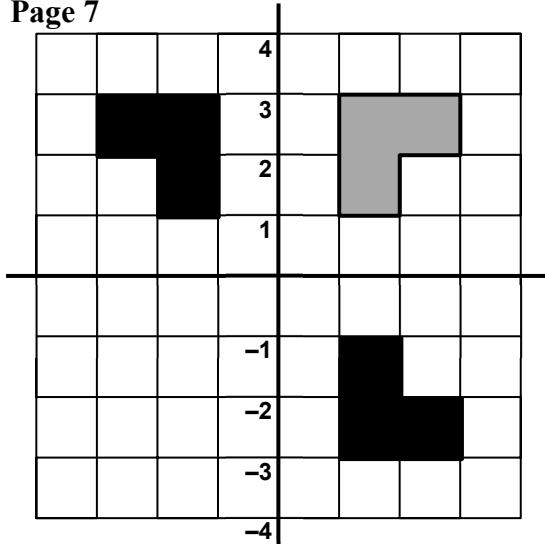
Answers (Contd)

Page 8
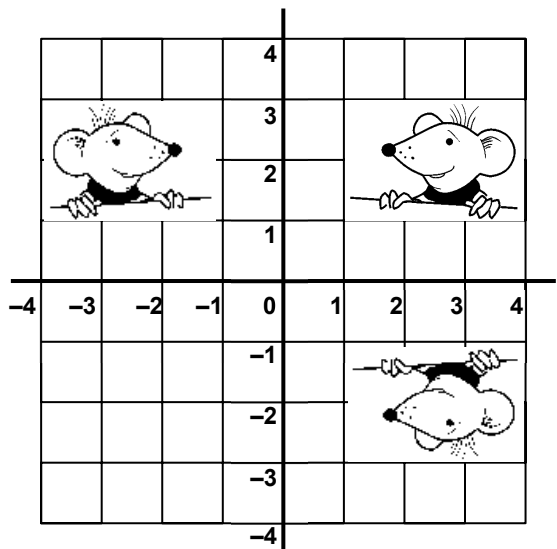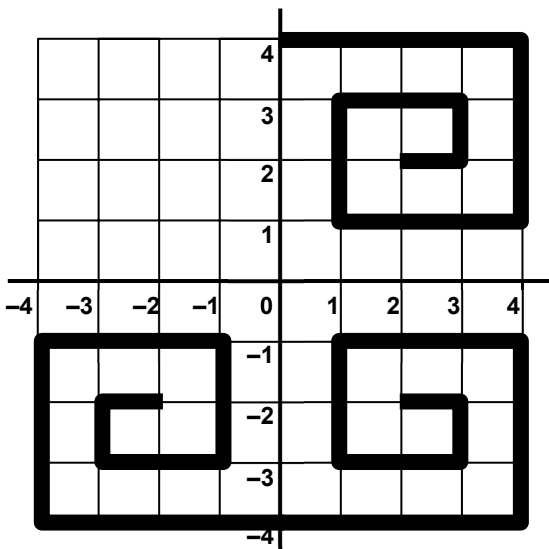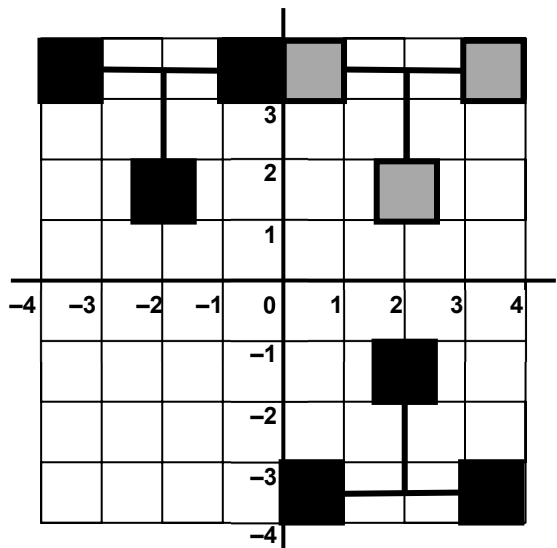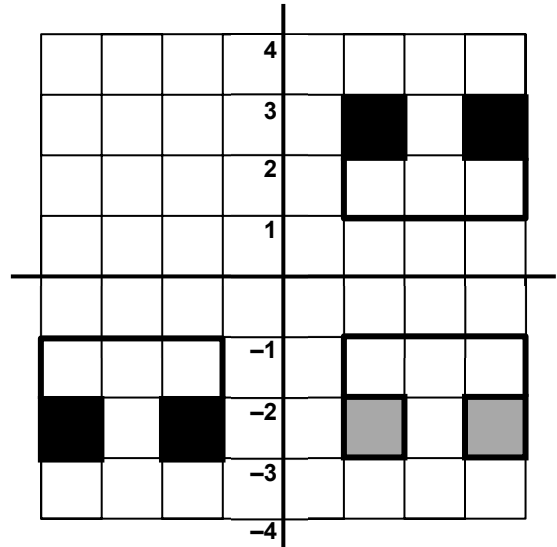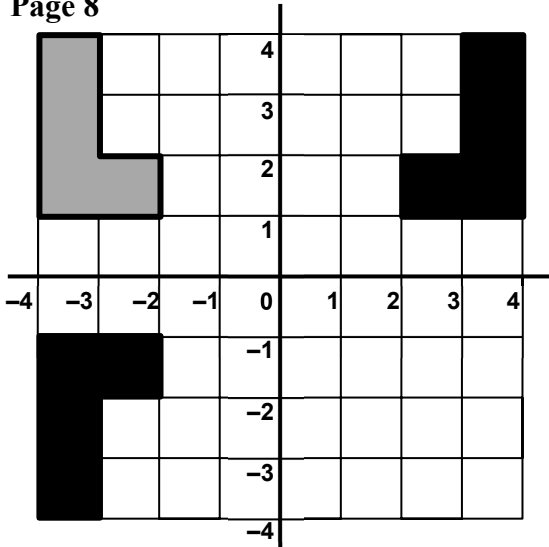
Answers (Contd)

Page 9
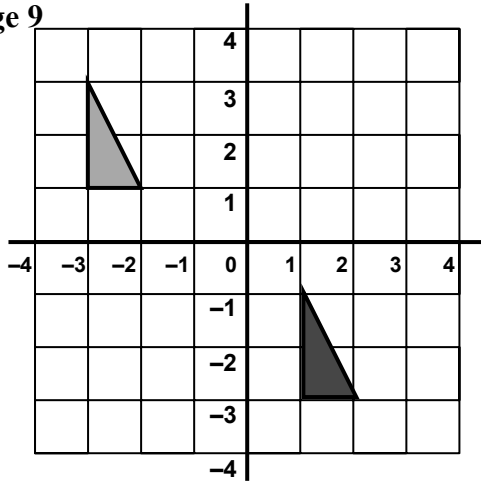
Translate **4** units to the **right** and
4 units **down**

Translate **5** units to the **left** and
5 units **up**

Translate **3** units to the **right** and
2 units **up**

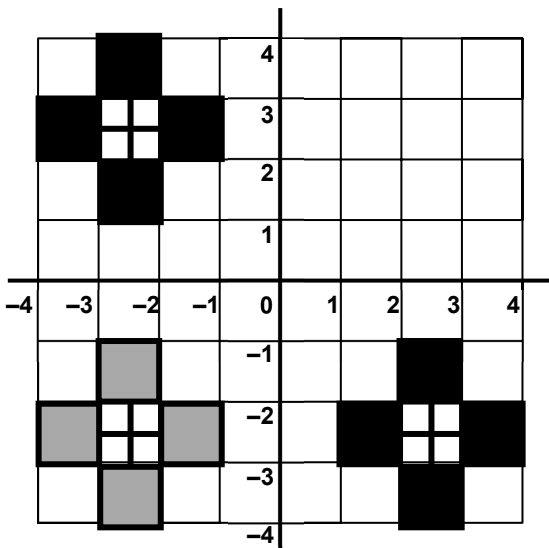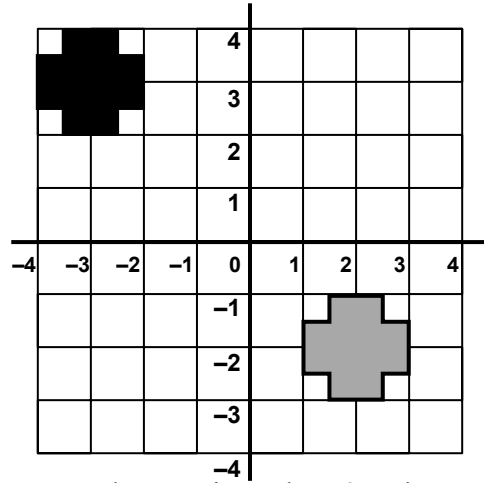Translate **5** units to the **right** and
3 units **down**

Translate **4** units to the **right** and
4 units **up**
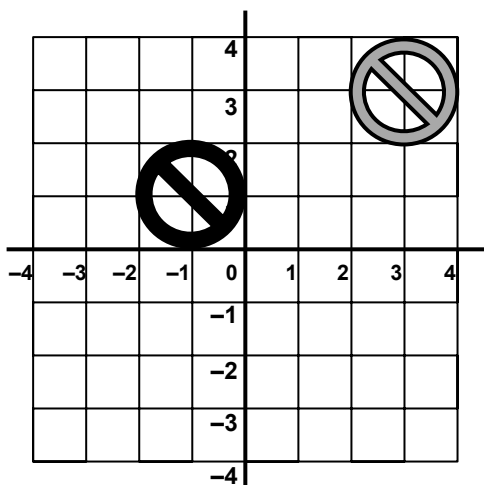
Translate **4** units to the **left** and
2 units **down**

Answers (Contd)

Page 10

Translate **5** units to the **left** and
4 units **down**

Translate **3** units to the **right** and
4 units **down**

Translate **4** units to the **left** and
4 units **up**

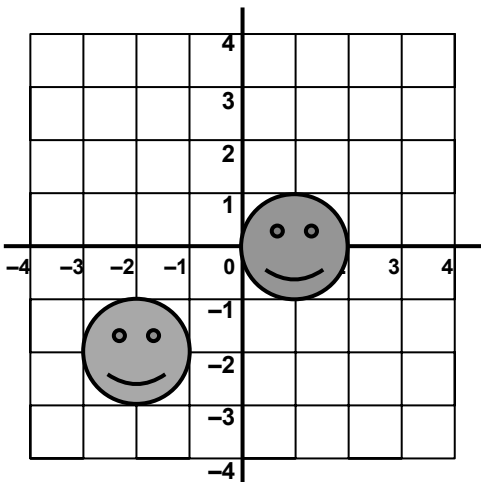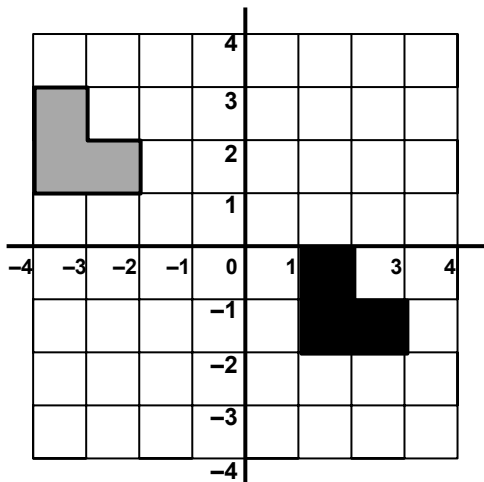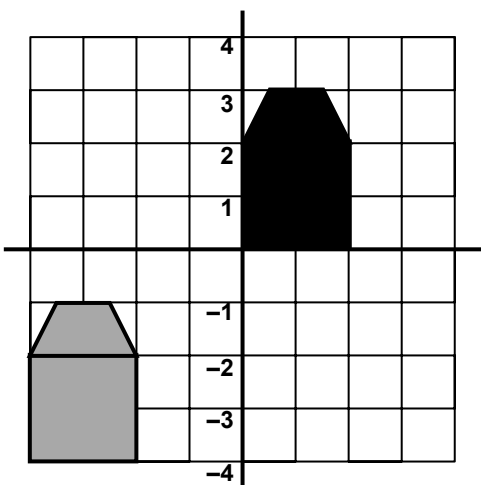Translate **3** units to the **right** and
4 units **up**

Translate **4** units to the **right** and
5 units **down**

Translate **3** units to the **left** and
4 units **up**