# Year Five
# Maths
# Lesson 4

# Fluency Starter

- Keep up your daily practice of 5 a day [https://corbettmathsprimary.com/5-a-day/](https://corbettmathsprimary.com/5-a-day/) and challenge yourself to Bronze, Silver, Gold or Platinum!

- Or Complete Flashback 4 for your daily starter (on the next slide).

- Log on to Doodlemaths for 15 minutes each day and try and keep in the Green Zone.

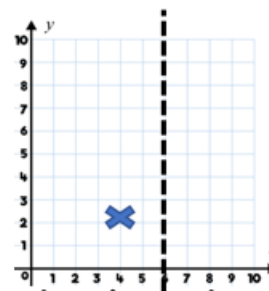- There are also some Maths activities on Purple Mash to complete.

# Fluency Starter

1) What will the coordinate of the cross be if it's reflected in the mirror line?

2) How many vertices does a tetrahedron have?

3) What do angles on a straight line add up to?

4) Complete the number sentence using <, > or =

$$\frac{13}{18} \bigcirc \frac{5}{6}$$

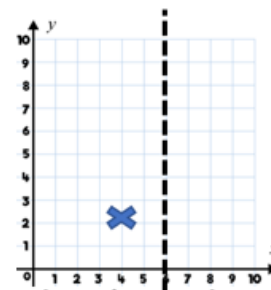White Rose Maths

# Fluency Starter Answers

**Flashback 4**

1) What will the coordinate of the cross be if it's reflected in the mirror line?   **(8,2)**

2) How many vertices does a tetrahedron have?   **4**

3) What do angles on a straight line add up to?   **180°**

4) Complete the number sentence using <, > or =

$$\frac{13}{18} \; < \; \frac{5}{6}$$

White Rose Maths
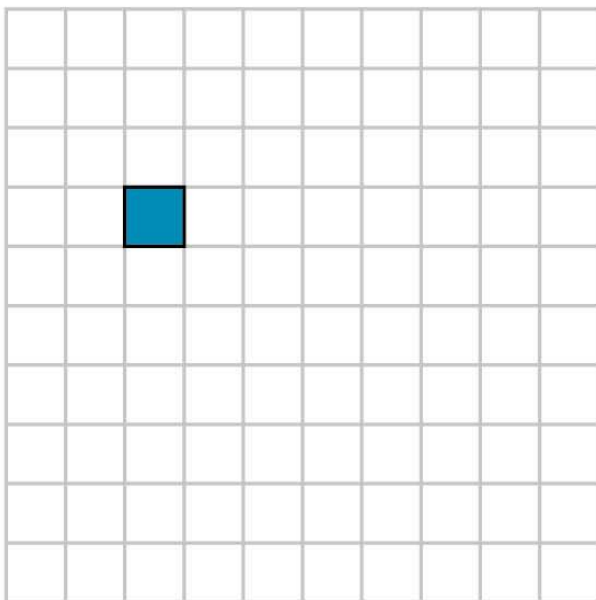
# **Lesson Aims**

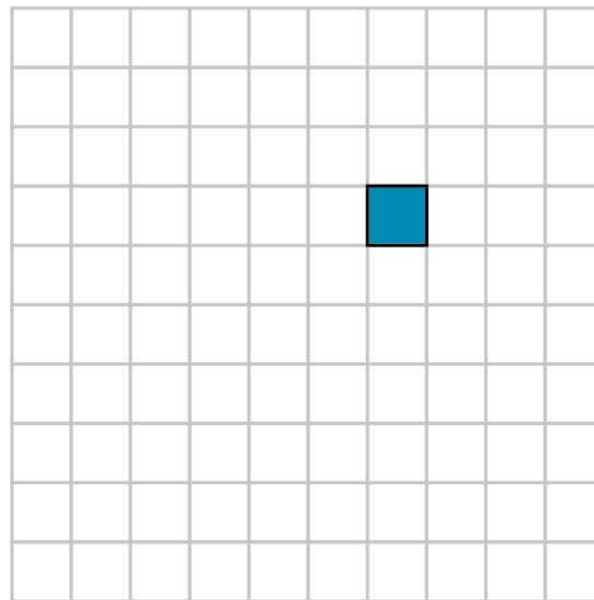- I can translate a shape

# Translation

**1** Complete the translations.

**a)** Translate the shape
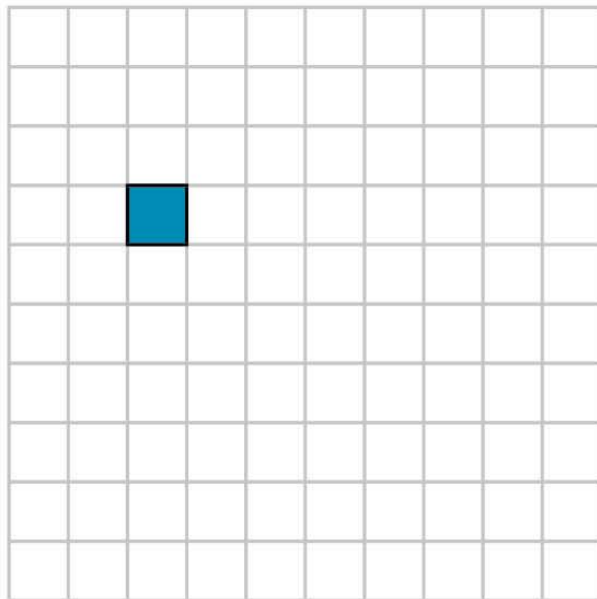4 squares to the right.

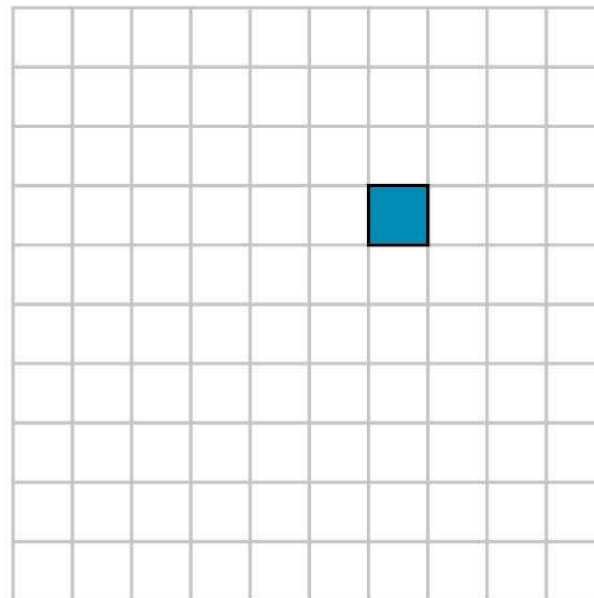**b)** Translate the shape
2 squares up.

**1**

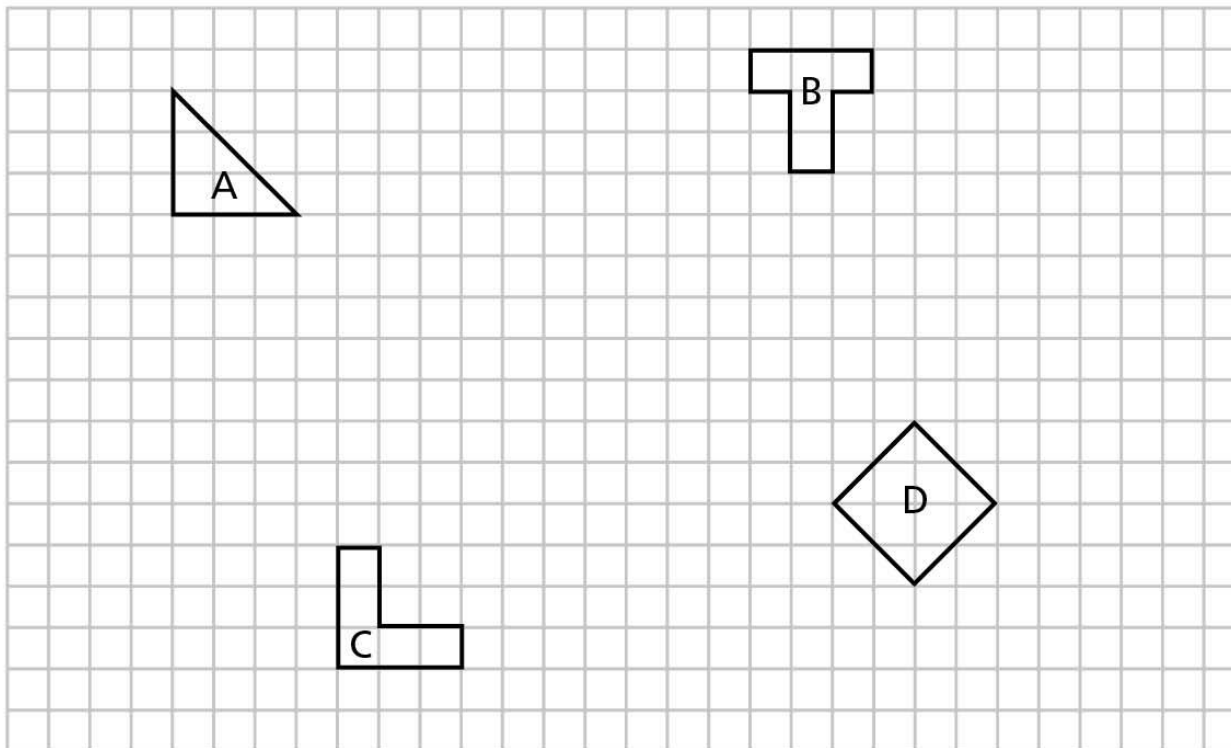**c)** Translate the shape
4 squares right, 2 squares up.

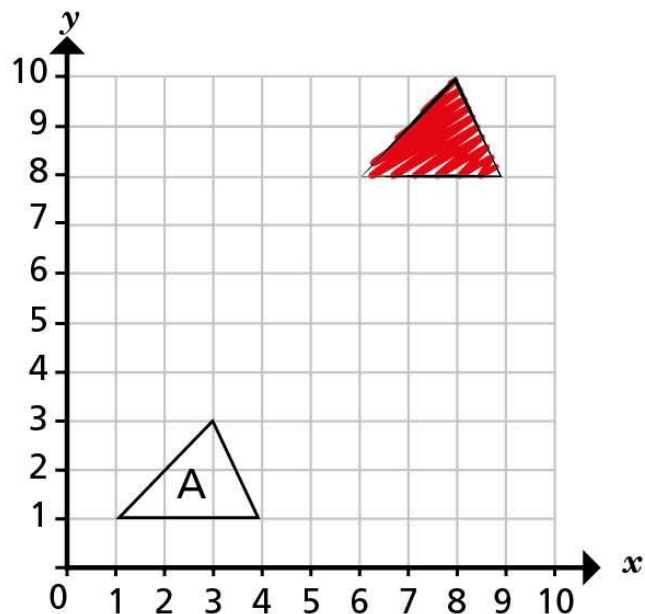**d)** Translate the shape 3
squares left, 5 squares down.

**2** Four shapes have been drawn on a grid.



a) Translate shape A 5 squares to the right and 3 squares down.

b) Translate shape B 4 squares to the left and 7 squares down.

c) Translate shape C 6 squares to the left.

d) Translate shape D 4 squares to the right and 8 squares up.

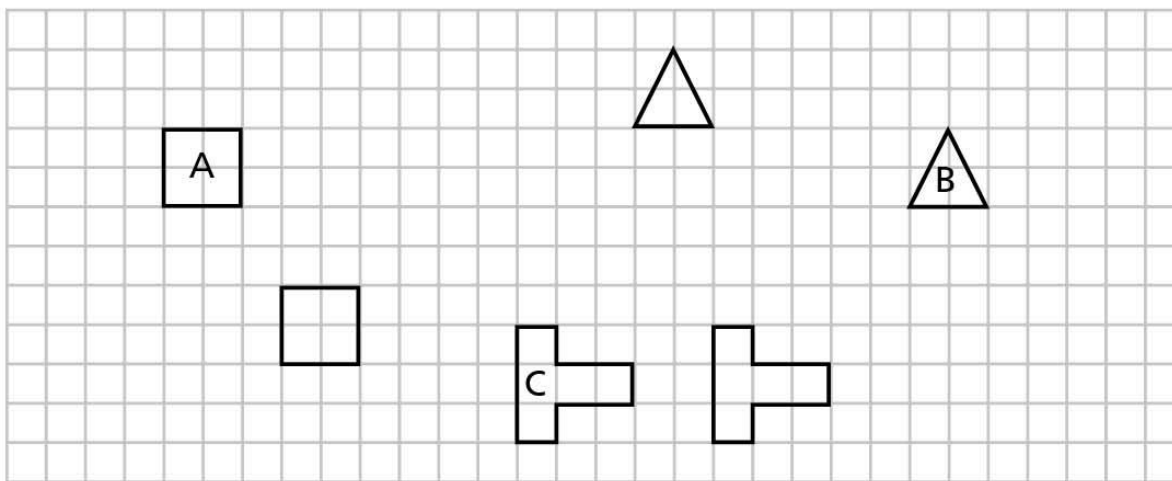**3** Dora has translated triangle A 2 squares to the right and 7 squares up.



Is Dora's drawing correct? _____

Explain why.
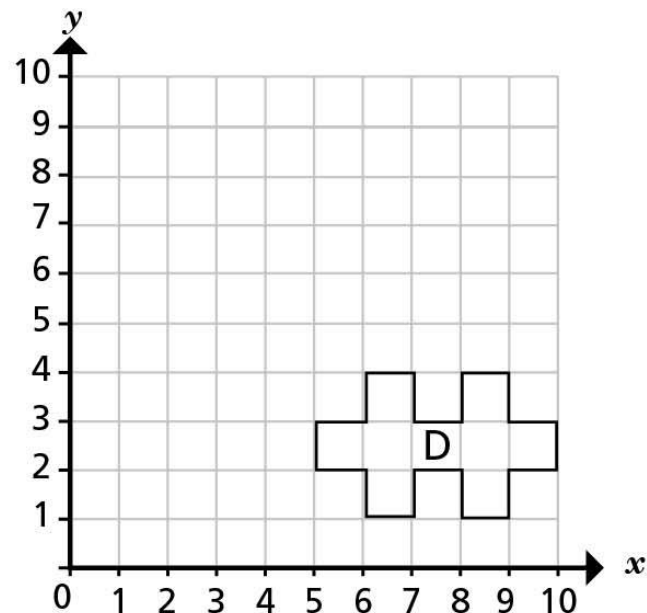
**4** Complete the sentences to describe the translations.



a) Shape A has been translated ☐ squares to the right and

☐ squares down.

b) Shape B has been translated ☐ squares to the _____

and ☐ squares _____

c) Shape C has been translated ☐ squares to the _____

and ☐ squares _____

**5** A shape has been drawn on a coordinate grid.

**a)** Translate shape D 4 squares to the left and 6 squares up.

Label the new shape E.
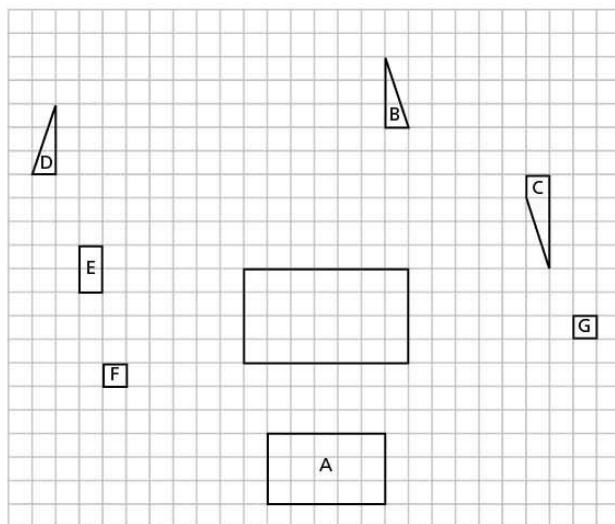
**b)** Describe the translation from shape E to shape D.



_____

What do you notice? Does this always happen?

**6** Eight polygons are drawn on the grid.



**a)** Translate shape A 10 squares up.

**b)** Translate shape B 6 squares down.

**c)** Translate shape C 6 squares left.

**d)** Translate shape D 9 squares to the right and 4 squares down.

**e)** Translate shape E 10 squares to the right and 3 squares down.

**f)** Translate shape F 7 squares to the right and 3 squares up.

**g)** Translate shape G 9 squares to the left and 1 square up.
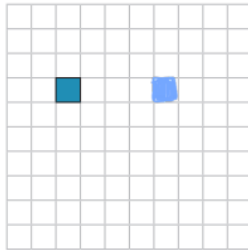
Create your own problem like this for a partner.
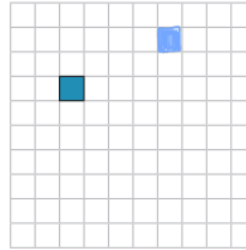
# Fluency Activity Answers
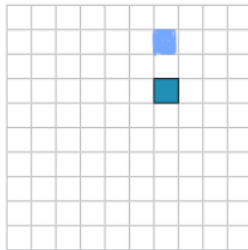
## Translation

**1** Complete the translations.

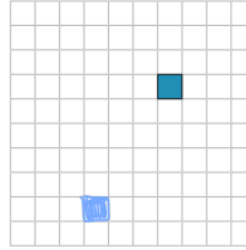**a)** Translate the shape 4 squares to the right.

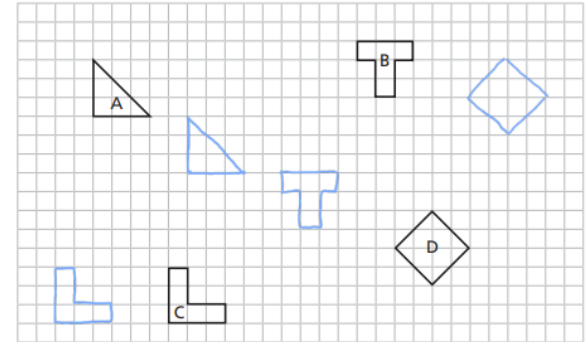**c)** Translate the shape 4 squares right, 2 squares up.

**b)** Translate the shape 2 squares up.

**d)** Translate the shape 3 squares left, 5 squares down.
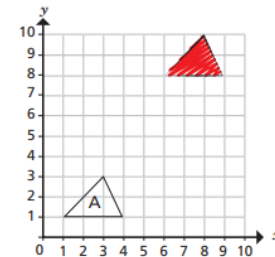
**2** Four shapes have been drawn on a grid.

**a)** Translate shape A 5 squares to the right and 3 squares down.

**b)** Translate shape B 4 squares to the left and 7 squares down.

**c)** Translate shape C 6 squares to the left.

**d)** Translate shape D 4 squares to the right and 8 squares up.

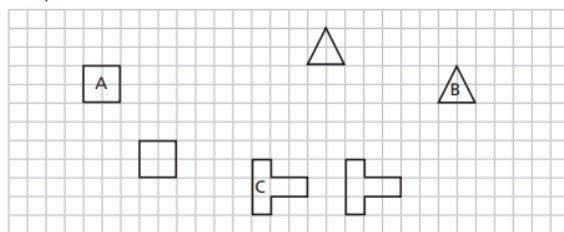**3** Dora has translated triangle A 2 squares to the right and 7 squares up.
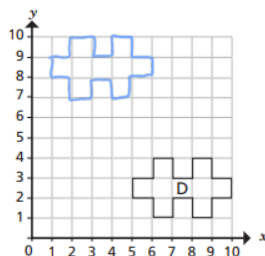
Is Dora's drawing correct? __No__

Explain why.

# Fluency Activity Answers

**4** Complete the sentences to describe the translations.

a) Shape A has been translated **3** squares to the right and **4** squares down.

b) Shape B has been translated **7** squares to the left and **2** squares up.

c) Shape C has been translated **5** squares to the right and **0** squares up/down.
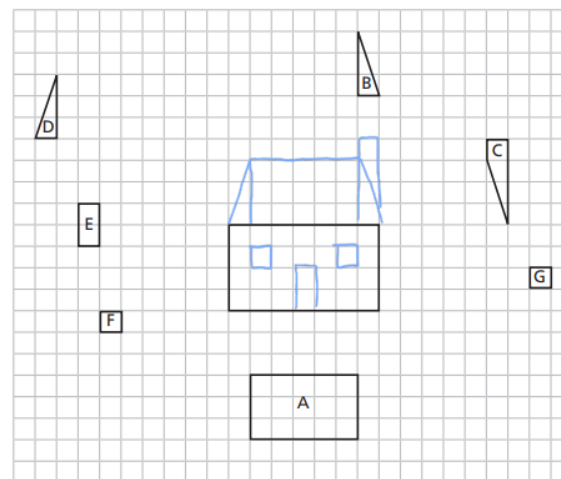
**5** A shape has been drawn on a coordinate grid.

a) Translate shape D 4 squares to the left and 6 squares up. Label the new shape E.

b) Describe the translation from shape E to shape D.

4 squares to the right and 6 squares down.

What do you notice? Does this always happen?
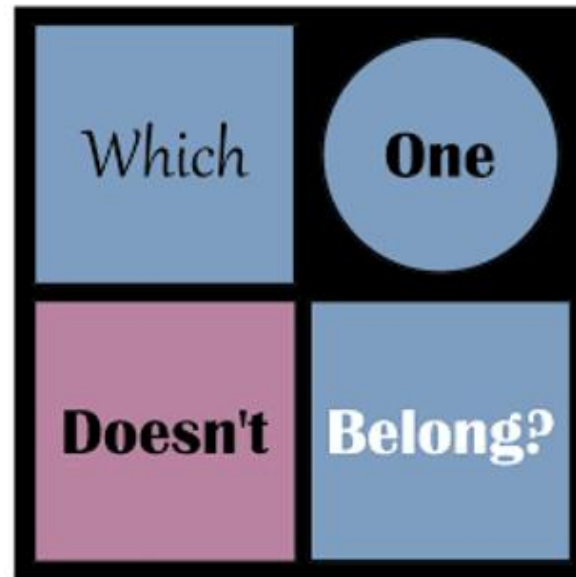
**6** Eight polygons are drawn on the grid.

a) Translate shape A 10 squares up.

b) Translate shape B 6 squares down.

c) Translate shape C 6 squares left.

d) Translate shape D 9 squares to the right and 4 squares down.

e) Translate shape E 10 squares to the right and 3 squares down.

f) Translate shape F 7 squares to the right and 3 squares up.

g) Translate shape G 9 squares to the left and 1 square up.

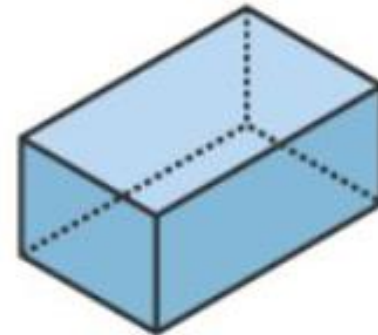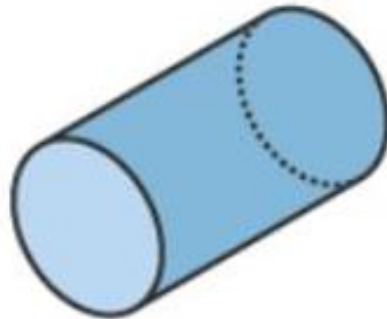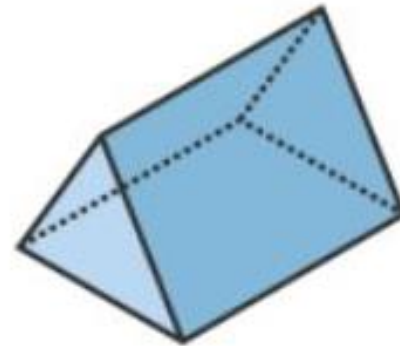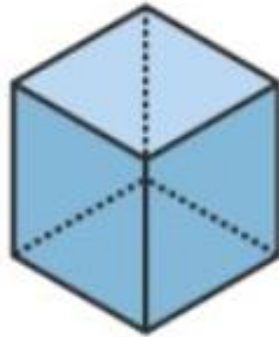Create your own problem like this for a partner.

# Problem Solving

# Problem Solving

- How many ways can you find?

# Problem Solving

- How many different ways did you find?
- Can you explain your reasoning?