Symmetry, reflection and position

MyMaths

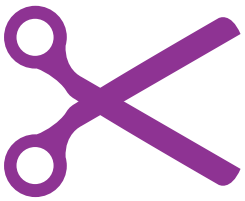
You will need a ruler for this worksheet.

Question 1

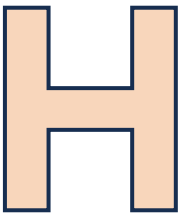
Here are some shapes.

A

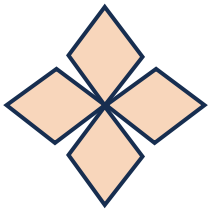
B



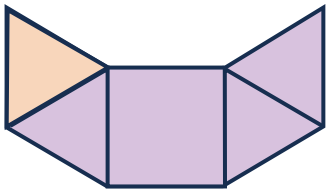
C



D



E



Which of these shapes have two or more lines of symmetry?

Which shapes have only one line of symmetry?

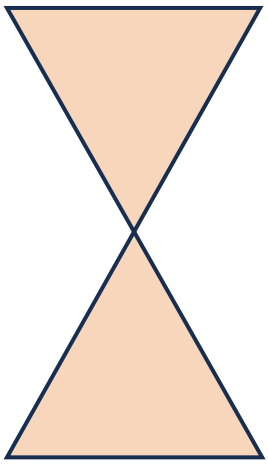
Which shapes have no lines of symmetry?

Symmetry, reflection and position

Question 2

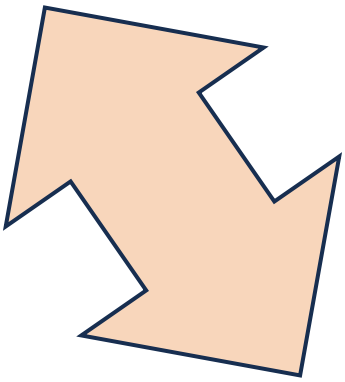
Can you draw two lines of symmetry on these shapes?

a



b

c



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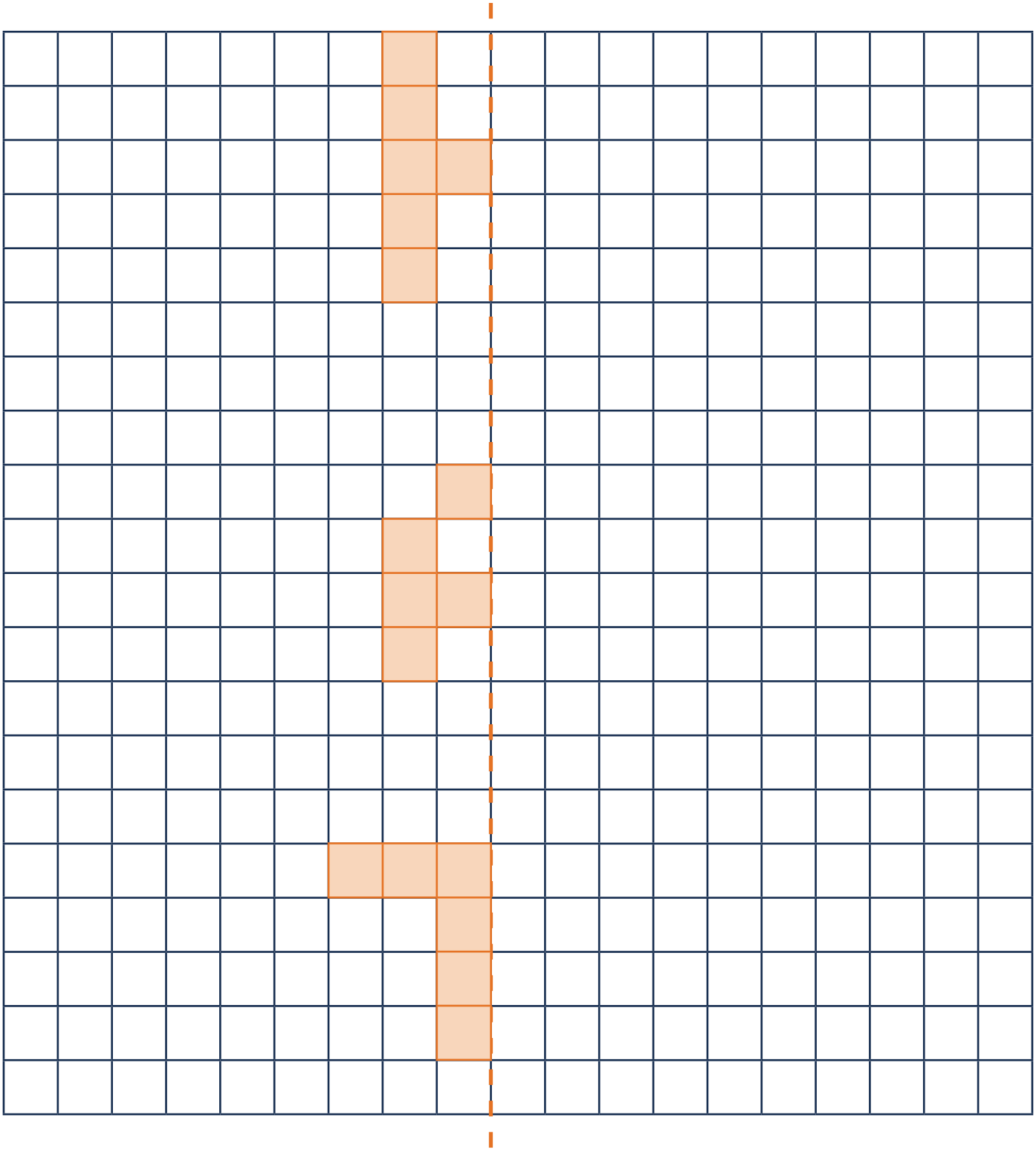
Question 3

Can you complete these patterns by reflecting them in the mirror line?



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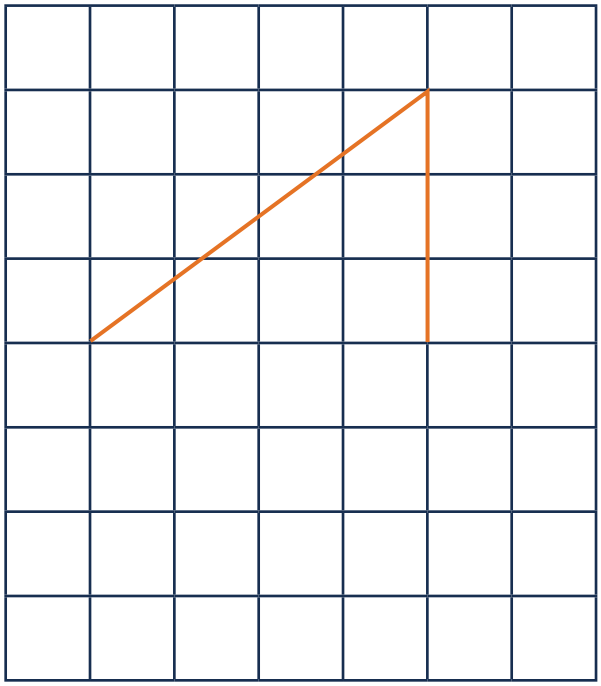
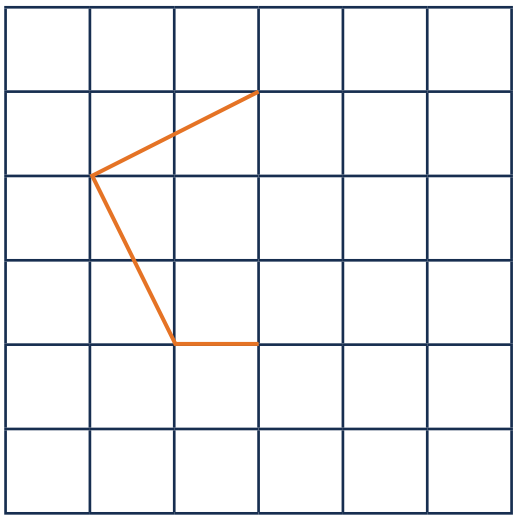
Question 4

Draw a mirror line and complete the shapes to make:

a a triangle



b a pentagon



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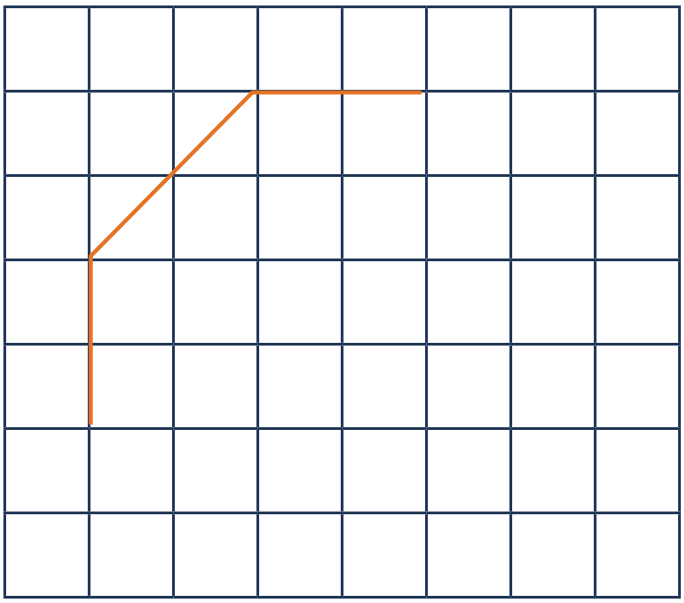
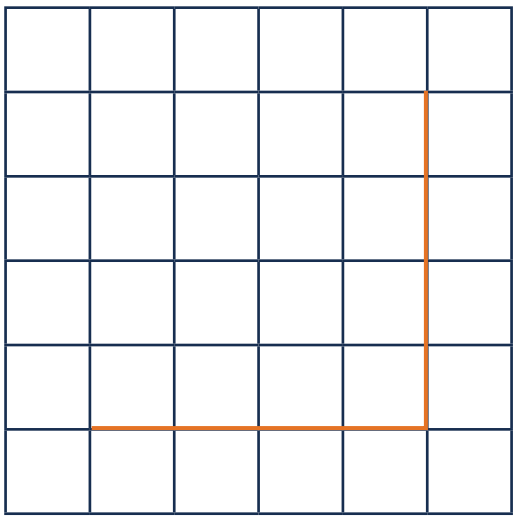
c a hexagon



d a square



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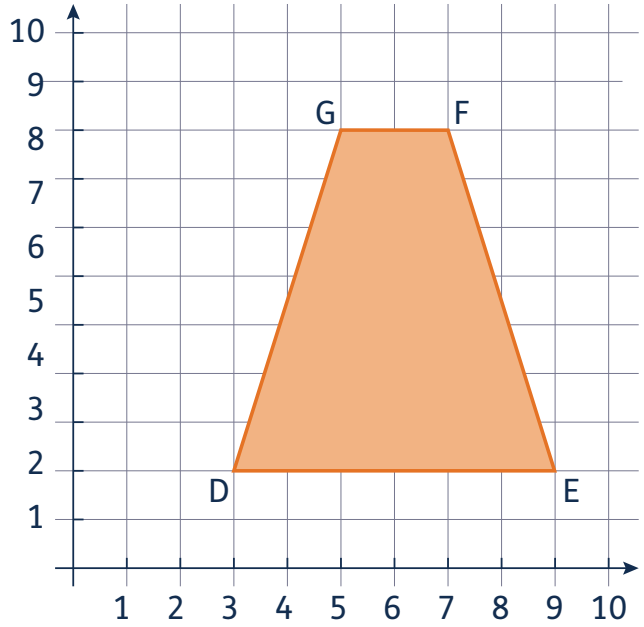
Question 5

Here is a trapezium on a grid. It is called DEFG.



Can you find the coordinates of the shape?

D: (☐ , ☐)

E: (☐ , ☐)

F: (☐ , ☐)

G: (☐ , ☐)

What are the coordinates of:

the far top right of the grid? (☐ , ☐)

the top of the *y*-axis? (☐ , ☐)

the far right-hand end of the *x*-axis? (☐ , ☐)

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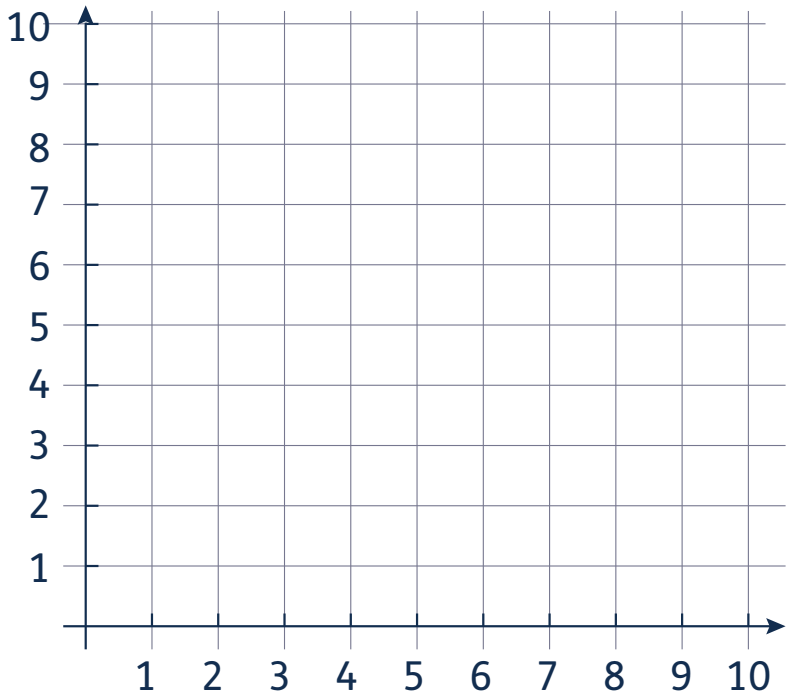
Question 6

a Can you draw the following points on the grid below?

P (3,2) Q (3,8) R (5,8) S (5,2)



b Join the points together. What shape have you drawn?

c What are the coordinates of a point halfway between:

P and Q? (,) Q and R? (,)

P and S? (,)

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d Draw a square on the same grid that is 2 squares by 2 squares. Label its vertices EFGH.

e What are the coordinates of your square?

E: (☐ , ☐) F: (☐ , ☐)

G: (☐ , ☐) H: (☐ , ☐)

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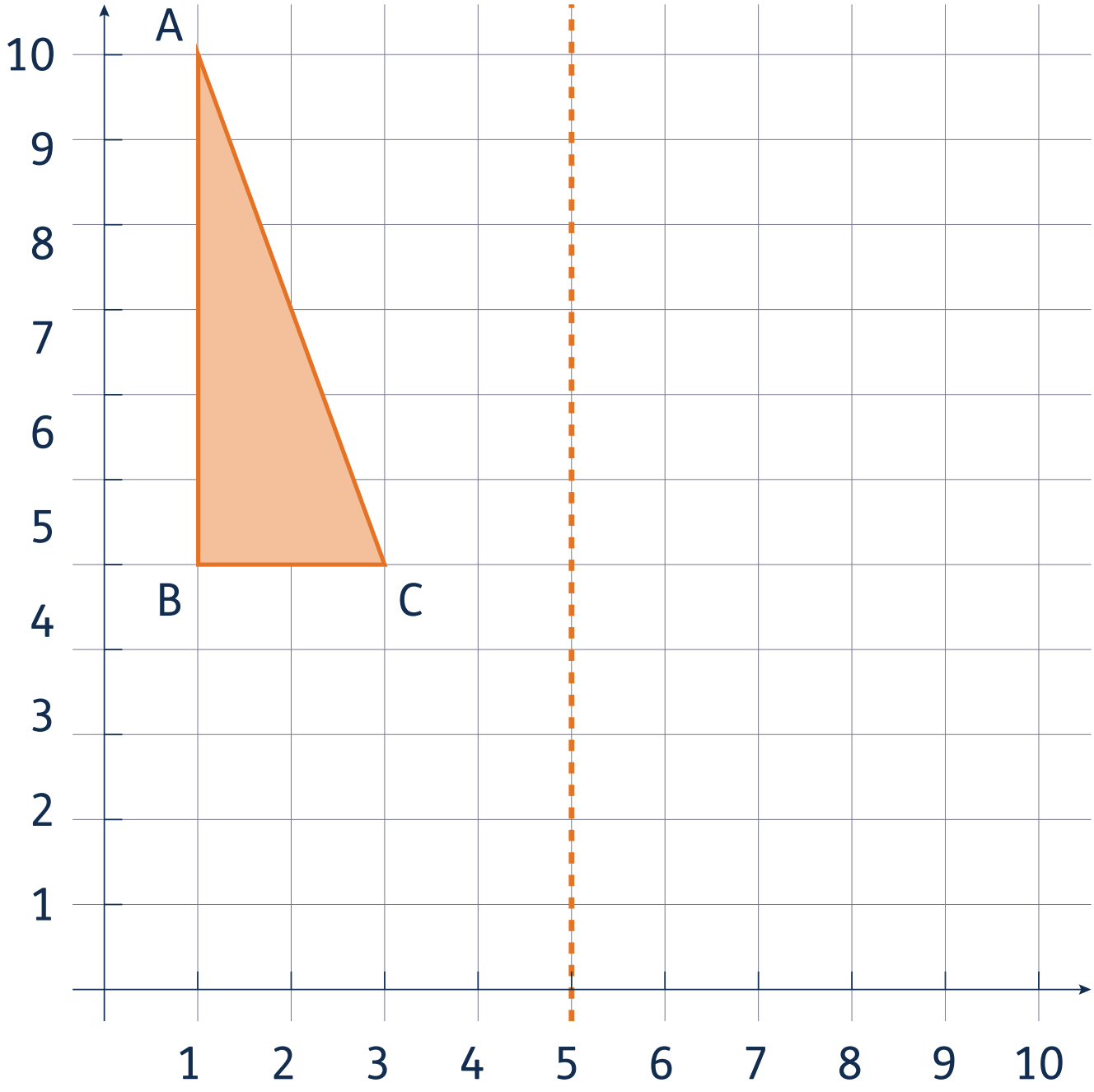
Question 7

Work out the new coordinates when these shapes are reflected in the mirror line. Draw the new shape and write the new coordinates.

a



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b