## Q1.

On the grid there are three points joined by two lines.


Lara plots another point on the grid at (-1, 2).
She joins the points to make a quadrilateral.
Complete Lara's quadrilateral on the grid.
Use a ruler.

Then Lara translates the quadrilateral $\mathbf{4}$ squares to the right.
Draw the quadrilateral in its new position on the grid.

Q2.
Here is a shape on a grid.
The shape is translated so that point $\mathbf{A}$ moves to $(7,8)$.
Draw the shape in its new position.
Use a ruler.


1 mark
Q3.
Here is a triangle drawn on a coordinate grid.


The triangle is translated 7 right and 5 up.
Draw the triangle in its new position.

Q4.
A triangle is translated from position $\mathbf{A}$ to position $\mathbf{B}$.

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| A |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  | B |  | $\square$ |  |  |  |  |
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Complete the sentence.


Q5.

Draw the reflection of the shape in the mirror line.
Use a ruler.

## mirror line



Q6.
Complete the diagram below to make a shape that is symmetrical about the mirror line.
Use a ruler.


Q7.
Complete the diagram below to make a shape that is symmetrical about the mirror line.
Use a ruler.


Q8.
Draw the reflection of the shaded shape in the mirror line.


Q9.
Draw the reflection of the shaded shape in the mirror line.


Q10.
Here is a shaded shape on a square grid.
Reflect the shape in the mirror line.

Use a ruler.


Q11.
Shade two squares and one triangle to make this design symmetrical about the mirror line.

mirror line

## Q12.

Here is a shaded shape on a grid.
The shape is translated so that point $\mathbf{A}$ moves to point $\mathbf{B}$.
Draw the shape in its new position.
Use a ruler.


Q13.
Here is a quadrilateral on a square grid.
The quadrilateral is translated so that point $\mathbf{A}$ moves to point $\mathbf{B}$.
Draw the quadrilateral in its new position.
Use a ruler.


Q14.
Follow this route with your pencil.


Complete this chart showing the route from START to STOP.
START

| left 5 |
| :--- |
| up 3 |
| right 2 |
|  |
|  |
| STOP |

## Q15.

Here is a jigsaw with one piece missing.


Which one of the pieces below fits the hole in the middle?


A

B

C

D


Q16.
Kyle has drawn triangle ABC on this grid.


Holly has started to draw an identical triangle DEF.
What will be the coordinates of point $\mathbf{F}$ ?


## Q17.

Lisa places a counter on square D4


She moves it 2 squares east and 3 squares south.
Write the position of the square she moves it to.


1 mark

Q18.
Here is a triangle on a square grid.
The triangle is translated so that point $\mathbf{A}$ moves to point $\mathbf{B}$.
Draw the triangle in its new position.
Use a ruler.

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| $\mathbf{A}$ |  |  |  |  |  |  |  |  |
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Q19.

Here are four shapes.


They can be fitted together in a straight line so that there are no gaps between them.
Write the order of the letters of the shapes when they all fit together.


1 mark

Q20.
Here are some tiles on a square grid.

|  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  | B |  |  |
|  |  | A |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | C |  |  | D |  | E |  |
|  |  |  |  |  |  |  |  |
|  |  | F |  |  | G |  |  |
|  |  |  |  |  |  |  |  |

Three different tiles can be fitted together without overlapping to make a shape identical to tile $\mathbf{A}$.

Write the letters of the three tiles.
$\qquad$ and $\qquad$ and $\qquad$

## Mark schemes

## Q1.

(a) Quadrilateral completed, as shown:


Accept slight inaccuracies in drawing provided the intention is clear.
(b) Quadrilateral translated correctly, as shown:


Accept slight inaccuracies in drawing provided the intention is clear.
Award ONE mark if the answer to (b) is a quadrilateral with sides drawn and is a correct translation of their answer to (a).

Q2.
Shape located correctly, as shown:


Q3.
Triangle with vertices at $(2,1)$ AND $(2,4)$ AND $(5,1)$ drawn on the grid as shown:


Accept slight inaccuracies in drawing

Q4.

The triangle has moved 6 squares to the right and 5 squares down.

## Q5.

Diagram completed as shown:


Accept slight inaccuracies in drawing, provided the intention is clear.
Vertices must be within 2 mm of the correct grid points.
The reflection need not be shaded.

Q6.
Diagram completed as shown:


Accept slight inaccuracies in drawing provided the intention is clear.

Q7.
Diagram completed correctly as shown:


Accept slight inaccuracies in drawing, provided the intention is clear.

Q8.
Diagram completed as shown:


Accept slight inaccuracies in drawing.
Shape need not be shaded.

Q9.
Diagram completed as shown:


Accept slight inaccuracies in drawing Shape need not be shaded.

Q10.
Diagram completed, as shown:


Accept slight inaccuracies in drawing.
Shape need not be shaded for the award of ONE mark.

Q11.
Diagram completed as shown:

mirror line
Accept inaccurate drawing provided the intention is clear.

Q12.
Award TWO marks for three vertices of the shape, excluding B, translated correctly as shown below:


If the answer is incorrect, award ONE mark for two vertices, excluding B, translated correctly.

Accept slight inaccuracies in drawing provided intention is clear.

Up to 2

Q13.
Diagram completed as shown:


Accept slight inaccuracies in drawing

## Q14.

up 3
left 2
up 2
All correct for 1 mark.

## Q15.

C
Accept alternative, unambiguous indications of the answer such as a cross on shape $C$ or a line from $C$ to the hole.

Q16.
$(4,3)$
Coordinates must be written in the correct order.
Accept (6, 3), (4, -1) or (6-1)
Accept answers written on the diagram, with or without brackets and commas.

## Q17.

F1
Do not accept 1F.

Q18.
Diagram completed as shown:


Accept slight inaccuracies in drawing (see page 3 for guidance).

Q19.
D B A C
Accept C A B D.

Q20.
B AND C AND G
Letters may be given in any order.

