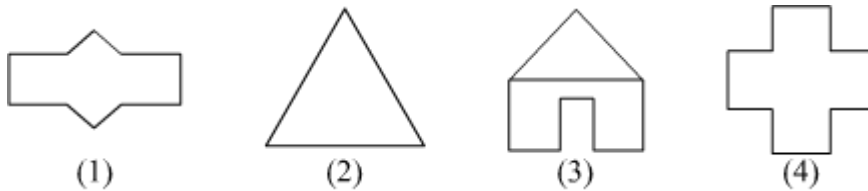


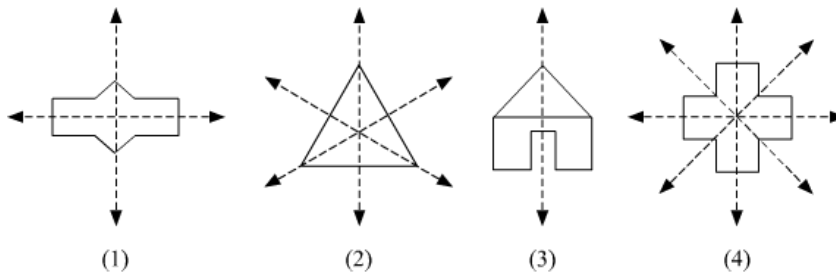
BOARD – ICSE	CLASS –7	TOPIC – PROBABILITY SOLVED QUESTIONS
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1: Draw the axes of symmetry of each of the figures below. Which of them has more than one axis of symmetry?



ANSWER:

The axis of symmetry of a figure divides the figure into two equal parts.



Figures (1), (2) and (4) have more than one axis of symmetry.

2: Write the capital letters of the English alphabet in your notebook. Try to draw their axes of symmetry. Which ones have an axis of symmetry? Which ones have more than one axis of symmetry?

ANSWER:



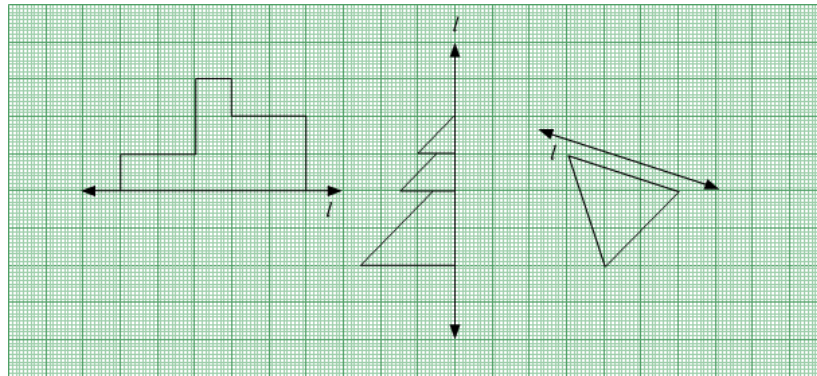
Letters which have an axis of symmetry:

A, B, C, D, E, H, I, K, M, O, T, U, V, W, X, Y

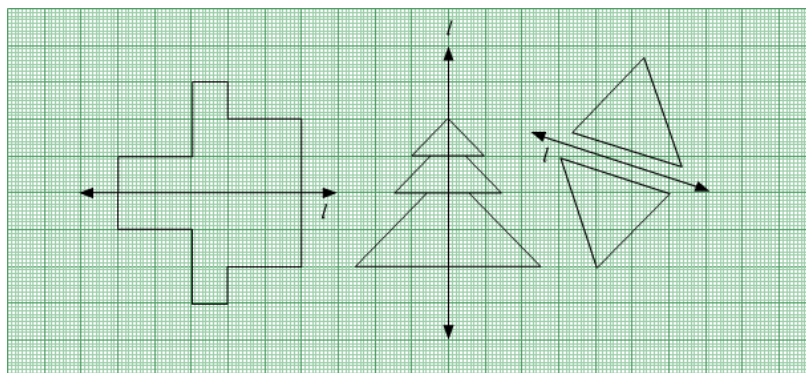
Letters which more than one axis of symmetry:

H, I, O, X

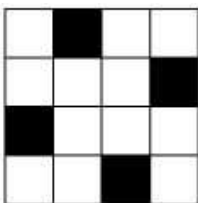
3 Along each figure shown below, a line l has been drawn. Complete the symmetrical figures by drawing a figure on the other side such that the line l becomes the line of symmetry.



ANSWER:



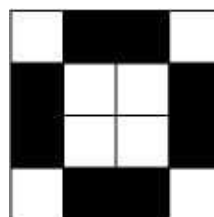
4. Copy the figure given here.



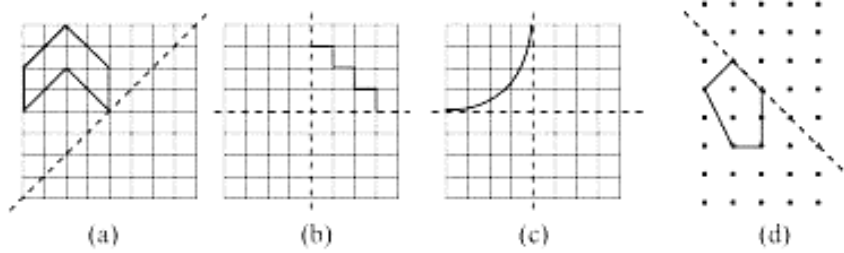
Take any one diagonal as a line of symmetry and shade a few more squares to make the figure symmetric about a diagonal. Is there more than one way to do that? Will the figure be symmetric about both the diagonals?

ANSWER:

We can shade a few more squares so as to make the given figure symmetric about any of its diagonals. Yes, the figure is symmetric about both the diagonals. There is more than one way so as to make the figure symmetric about a diagonal as we can choose any of its 2 diagonals.

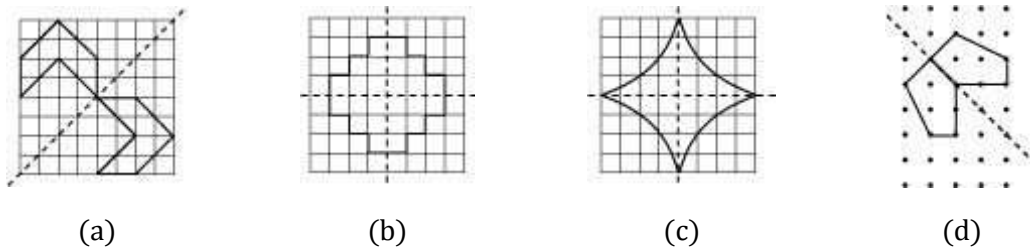


5. Copy the diagram and complete each shape to be symmetric about the mirror line (s):



ANSWER:

The given figures can be completed about the given mirror lines as follows.

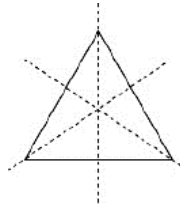


6. State the number of lines of symmetry for the following figures:

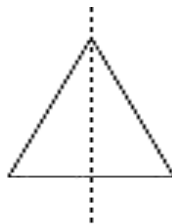
- (a) An equilateral triangle (b) An isosceles triangle (c) A scalene triangle

ANSWER:

(a) There are 3 lines of symmetry in an equilateral triangle.



(b) There is only 1 line of symmetry in an isosceles triangle.



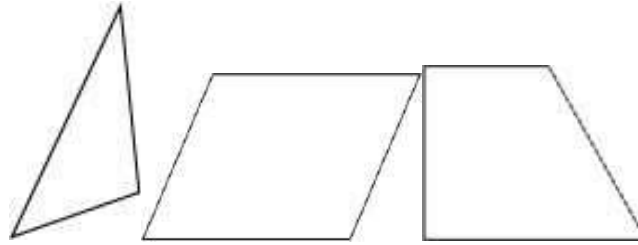
(c) There is no line of symmetry in a scalene triangle.



7. Give three examples of shapes with no line of symmetry.

ANSWER:

A scalene triangle, a parallelogram, and a trapezium do not have any line of symmetry.

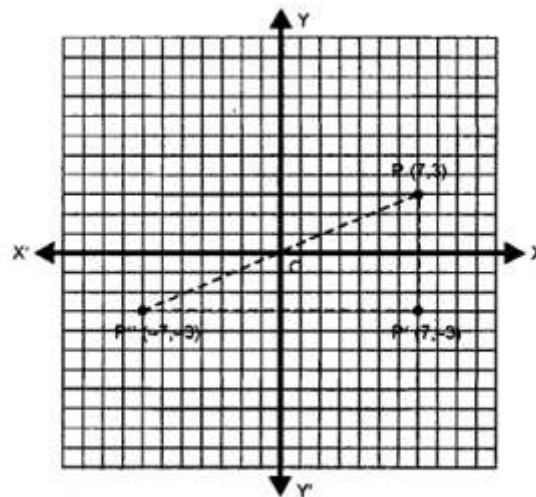


8. A point $P(7, 3)$ is reflected in x-axis to point P' . The point P' is further reflected in y-axis to point P'' . Find.

- (i) The co-ordinates of P' (ii) The coordinates of P'' (iii) The image of $P(7,3)$ in origin

ANSWER:

(i) Image of point $P(7, 3)$ when reflected in x-axis is P' whose co-ordinates will be $(7, -3)$



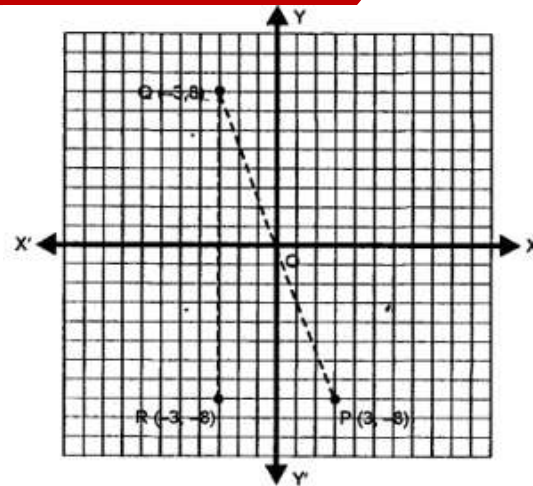
(ii) Image of point $P'(7, -3)$ when reflected in y-axis, is P'' whose coordinates will be $(-7, -3)$

(iii) The image of $P(7, 3)$ in origin is P'' whose coordinates are $(-7, -3)$

9. The point $P(3, -8)$ is reflected in origin to point Q . The point Q is further reflected in x-axis to point R . Find.

- (i) The co-ordinates of Q (ii) The coordinates of R (iii) The image of $P(3, -8)$ in y-axis

(i) The Image of the given point $P(3, -8)$ when reflected in origin is Q whose co-ordinates will be $(-3, 8)$



(ii) The image of $Q(-3, 8)$ when reflected in x -axis, is R whose coordinates will be $(-3, -8)$

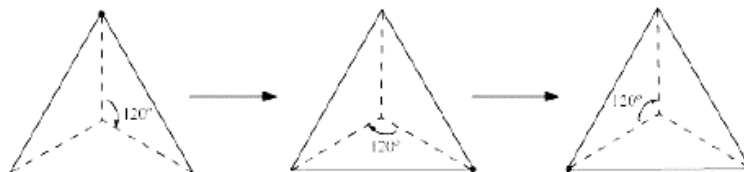
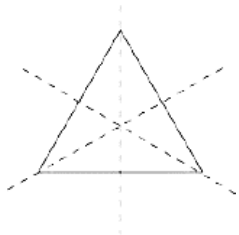
(iii) The image of $P(3, 8)$ in y -axis is R whose coordinates are $(-3, -8)$

10 Draw, wherever possible, a rough sketch of

(i) a triangle with both line and rotational symmetries of order more than 1.

(ii) a triangle with only line symmetry and no rotational symmetry of order more than 1.

(i) Equilateral triangle has 3 lines of symmetry and rotational symmetry of order 3.



(ii) Isosceles triangle has only 1 line of symmetry and no rotational symmetry of order more than 1.

