

MATHEMATICS

Class-7th

Chapter-14

Symmetry

Exercise-14.1

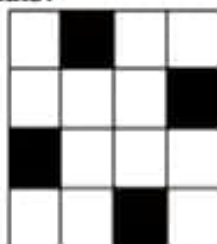
part-II

By:-A.K.Jha

Question 5:

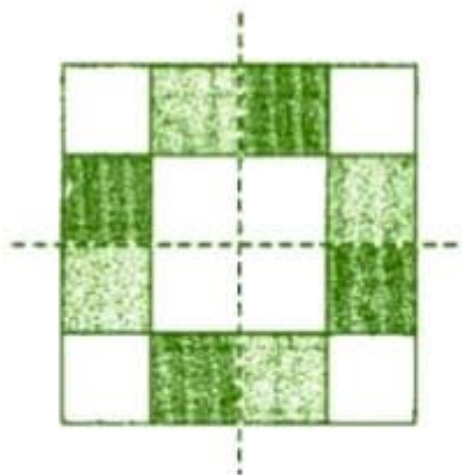
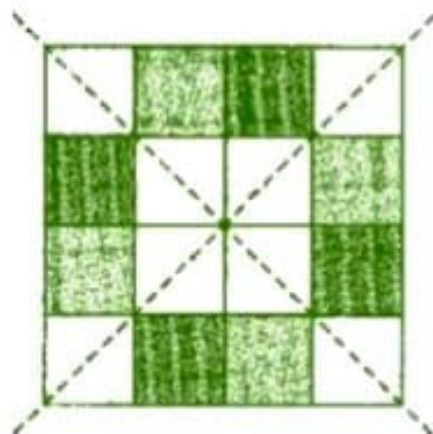
Copy the figure given here:

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 5:

Answer figures are:

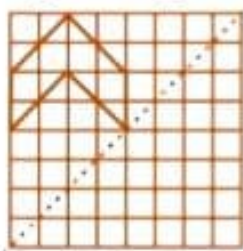


Yes, there is more than one way.

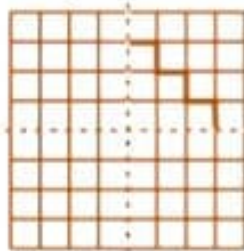
Yes, this figure will be symmetric about both the diagonals.

Question 6:

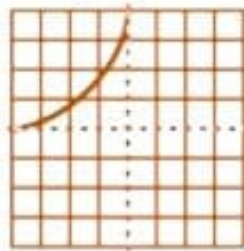
Copy the diagram and complete each shape to be symmetric about the mirror line(s):



(a)



(b)

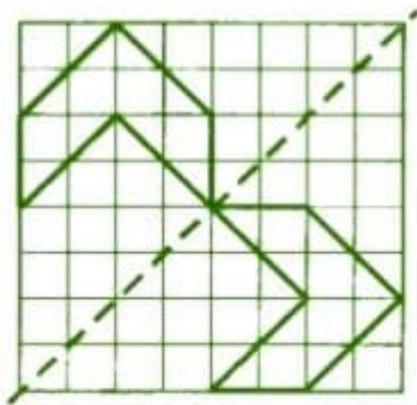


(c)

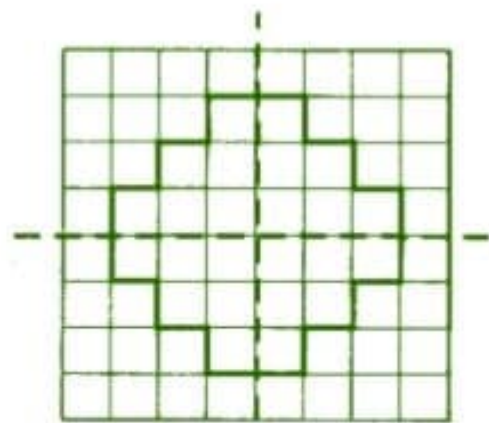


(d)

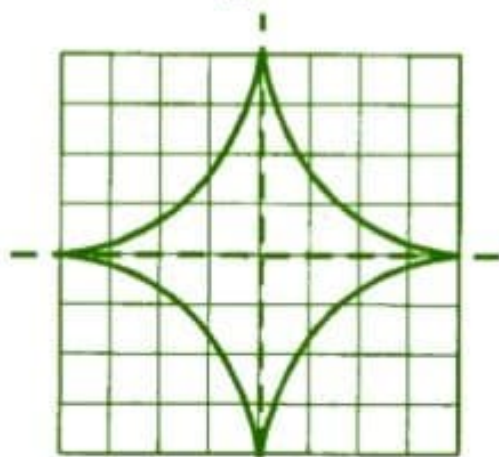
Answer 6:



(a)



(b)



(c)




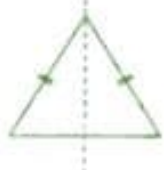

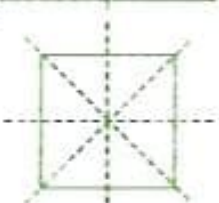
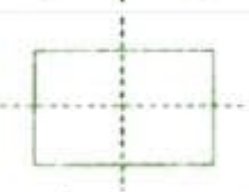
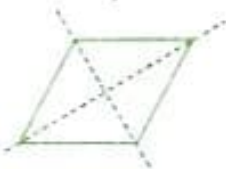
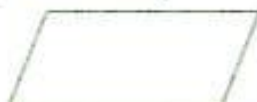
(d)


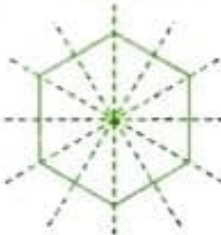
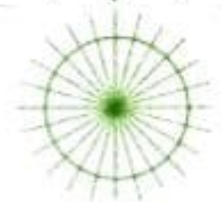
Question 7:

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

- (a) An equilateral triangle (b) An isosceles triangle (c) A scalene triangle
(d) A square (e) A rectangle (f) A rhombus
(g) A parallelogram (h) A quadrilateral (i) A regular hexagon
(j) A circle

Answer 7:

S.No.	Figure's name	Diagram with symmetry	Number of lines
(a)	Equilateral triangle		3
(b)	Isosceles triangle		1
(c)	Scalene triangle		0
(d)	Square		4
(e)	Rectangle		2
(f)	Rhombus		2
(g)	Parallelogram		0

(h)	Quadrilateral		0
(i)	Regular Hexagon		6
(j)	Circle		Infinite

Question 8:

What letters of the English alphabet have reflectional symmetry (i.e., symmetry related to mirror reflection) about.

- (a) a vertical mirror
- (b) a horizontal mirror
- (c) both horizontal and vertical mirrors

Answer 8:

- (a) Vertical mirror – A, H, I, M, O, T, U, V, W, X and Y

A		A		U		U
H		H		V		V
I		I		W		W
M		M		X		X
O		O		Y		Y
T		T				

- (b) Horizontal mirror – B, C, D, E, H, I, O and X

B	C	D	E	H	I	O	X
mirror							
B	C	D	E	H	I	O	X

- (c) Both horizontal and vertical mirror – H, I, O and X

Question 9:

Give three examples of shapes with no line of symmetry.

Answer 9:

The three examples are:

- Quadrilateral
- Scalene triangle
- Parallelogram

Question 10:

What other name can you give to the line of symmetry of:

- (a) an isosceles triangle?
- (b) a circle?

Answer 10:

- (a) The line of symmetry of an isosceles triangle is median or altitude.
- (b) The line of symmetry of a circle is diameter.