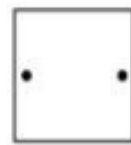




NCERT Solutions For Class 7 Maths Symmetry Exercise 14.1

Q1. Copy the figures with punched holes and find the axes of symmetry for the following:



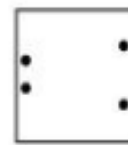
(a)



(b)



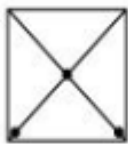
(c)



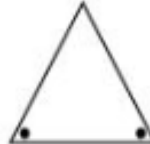
(d)



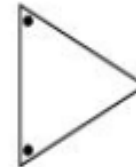
(e)



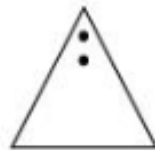
(f)



(g)



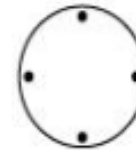
(h)



(i)



(j)



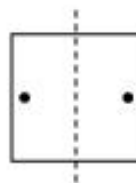
(k)



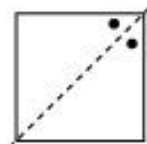
(l)

Ans: The axes of symmetry in the given figures are as follows.

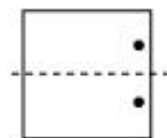
(a)



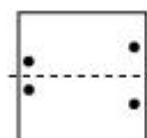
(b)



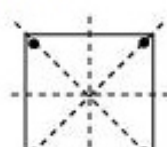
(c)



(d)

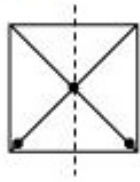


(e)

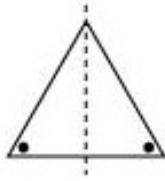




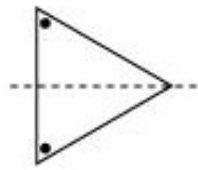
(f)



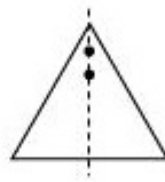
(g)



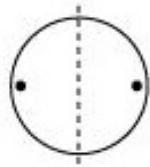
(h)



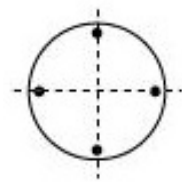
(i)



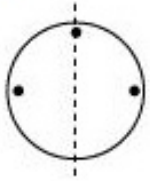
(j)



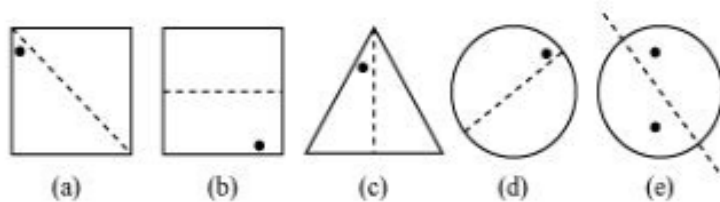
(k)



(l)

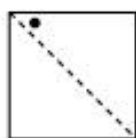


Q2. Given the line(s) of symmetry, find the other hole(s):

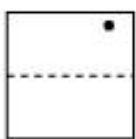


Ans:

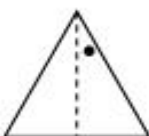
(a)



(b)



(c)



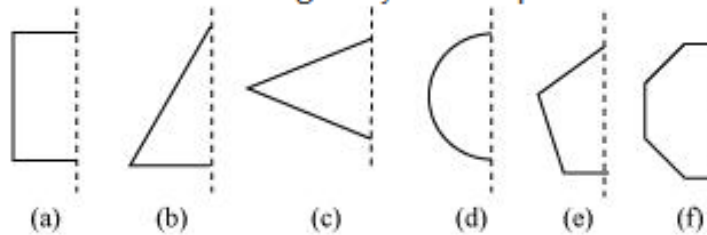
(d)



(e)

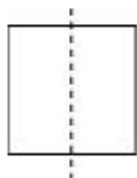


Q3. In the following figures, the mirror line (i.e., the line of symmetry) is given as a dotted line. Complete each figure performing reflection in the dotted (mirror) line. (You might perhaps place a mirror along the dotted line and look into the mirror for the image). Are you able to recall the name of the figure you complete?

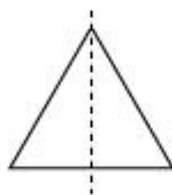


Ans: The given figures can be completed as follows.

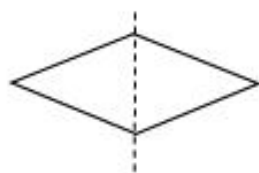
(a) It will be a square.



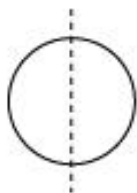
(b) It will be a triangle.



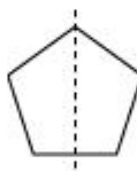
(c) It will be a rhombus.



(d) It will be a circle.

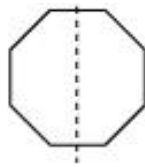


(e) It will be a pentagon.

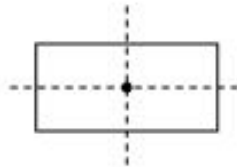


(f) It will be an octagon.

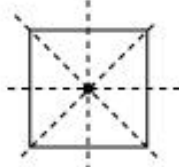




Q4. The following figures have more than one line of symmetry. Such figures are said to have multiple lines of symmetry.



(a)



(b)

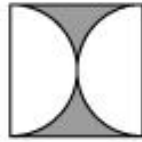


(c)

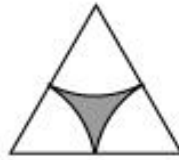
Identify multiple lines of symmetry, if any, in each of the following figures:



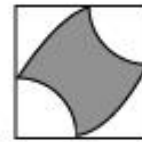
(a)



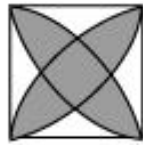
(b)



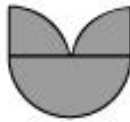
(c)



(d)



(e)



(f)



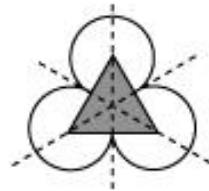
(g)



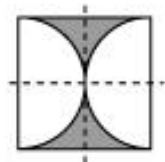
(h)

Ans:

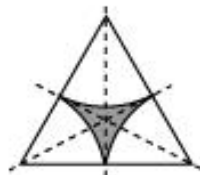
(a) The given figure has 3 lines of symmetry.
Hence, it has multiple lines
of symmetry.



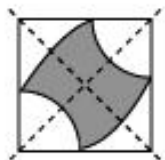
(b) The given figure has 2 lines of symmetry.
Hence, it has multiple lines
of symmetry.



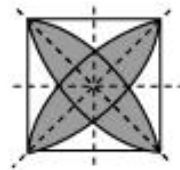
(c) The given figure has 3 lines of symmetry.
Hence, it has multiple lines
of symmetry.



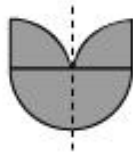
(d) The given figure has 2 lines of symmetry.
Hence, it has multiple lines of symmetry.



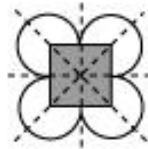
(e) The given figure has 4 lines of symmetry.
Hence, it has multiple lines
of symmetry.



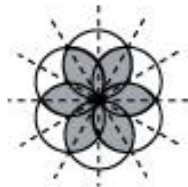
(f) The given figure has only 1 line of symmetry.



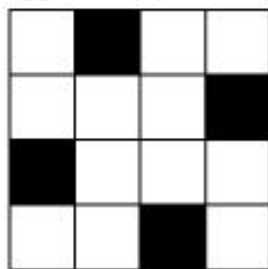
(g) The given figure has 4 lines of symmetry.
Hence, it has multiple lines
of symmetry.



(h) The given figure has 6 lines of symmetry.
Hence, it has multiple lines
of symmetry.



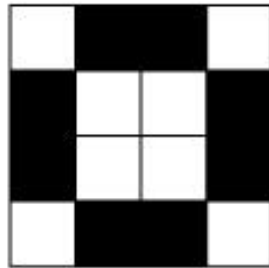
Q5. Copy the figure given here.



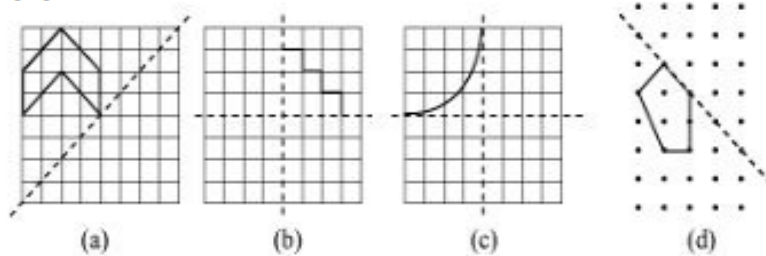
Take any one diagonal as a line of symmetry
and shade a few more squares to make the
figure symmetric about a diagonal. Is there more
than one way to do that? Will the figure be
symmetric about both the diagonals?

Ans: 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.

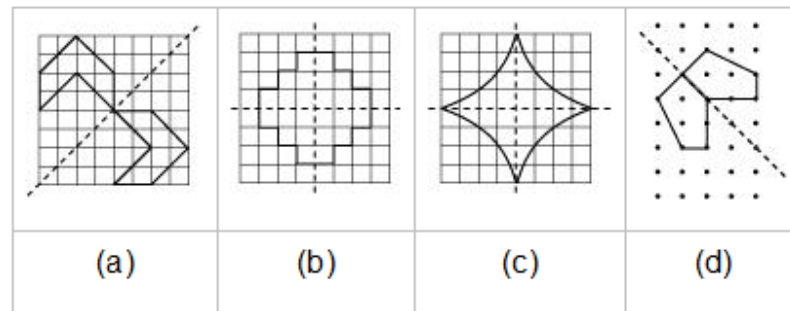


Q6. Copy the diagram and complete each shape to be symmetric about the mirror line (s):



Ans:

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



***** END *****