Reflection and Rotational Symmetry

Q1

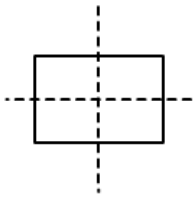
Answer :

(a) no line of symmetry

Q2

Answer :

(c) a line joining the midpoints of its opposite sides

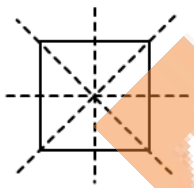


Q3

Answer :

(d) four lines of symmetry

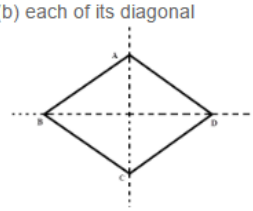
A square is symmetrical about both of its diagonals and both lines joining the midpoints of its opposite sides.



Q4

Answer :

(b) each of its diagonal



Q5

Answer :

(d) an unlimited number of lines of symmetry

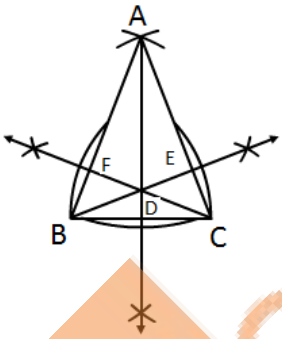
A circle is symmetrical about all its diameters and a circle has unlimited number of diameters. Therefore, a circle has unlimited number of lines of symmetry.

Q6

Answer :

(a) AD

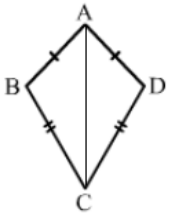
This triangle is symmetrical only about AD.
Any isosceles triangle is symmetrical about its one altitude, which is drawn from the vertex between the two equal sides to the unequal side of the triangle.



Q7

Answer :

(a) the diagonal AC



Since the part ABC is symmetrical to the part ADC, AC divides the figure into two equal parts.

Q8

Answer :

(c) two lines of symmetry

The letter O of the English alphabetic system is symmetrical about its horizontal and vertical line.

Q9

Answer :

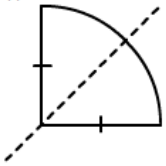
(a) no line of symmetry

Q10

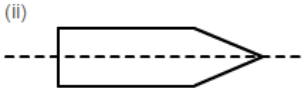
Answer :

Lines of symmetry are shown by the dotted lines.

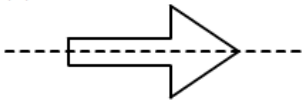
(i)



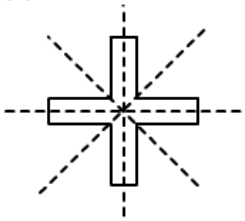
(ii)



(iii)



(iv)



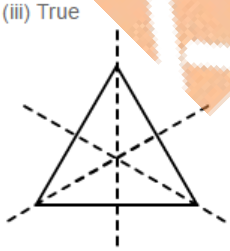
Q11

Answer :

(i) True

(ii) True

(iii) True



(iv) False

A rhombus is symmetrical about both of its diagonals.
So, a rhombus has two lines of symmetry.

(v) True

A square is symmetrical about both of its diagonals and both the lines joining the midpoints of its opposite sides.
So, a square has four lines of symmetry.

(vi) True

A rectangle is symmetrical about both the lines joining the midpoints of its opposite sides.
So, a rectangle has two lines of symmetry.

(vii) True

Each one of the letters, H, I, O and X, of the English alphabetic system is symmetrical about its horizontal and vertical line, in the middle of the letters.
So, all these letters have two lines of symmetry.