EduSahara™ Assignment

Name : Types of Symmetry

Chapter : Symmetry, Reflection and Rotation

Grade : ICSE Grade VIII

1. The English alphabet letter 'B' has how many lines of symmetry?

   (i) zero (ii) two (iii) one (iv) infinite (v) three

2. The English alphabet letter 'H' has how many lines of symmetry?

   (i) zero (ii) three (iii) infinite (iv) one (v) two

3. The English alphabet letter 'R' has how many lines of symmetry?

   (i) one (ii) three (iii) two (iv) zero (v) infinite

4. The English alphabet letter 'O' has how many lines of symmetry?

   (i) one (ii) three (iii) infinite (iv) two (v) zero

5. Which of the following English alphabet letters have one line of symmetry?

   (i) H (ii) J (iii) B (iv) I (v) P

6. Which of the following English alphabet letters have two lines of symmetry?

   (i) I (ii) Z (iii) U (iv) P (v) W

7. Which of the following English alphabet letters have infinite lines of symmetry?

   (i) T (ii) O (iii) U (iv) X (v) I

8. Which of the following English alphabet letters have zero lines of symmetry?

   (i) I (ii) G (iii) X (iv) C (v) A

9. Which of the following figures have no line of symmetry?

   a) angle with equal arms
   b) isosceles triangle
   c) scalene triangle
   d) line segment
   e) equilateral triangle
   f) angle with unequal arms

   (i) {a,f,c} (ii) {d,e,c} (iii) {c,f} (iv) {b,f} (v) {a,c}

10. Which of the following figures have one line of symmetry?

    a) equilateral triangle
    b) isosceles right angled triangle
    c) scalene triangle
    d) angle with equal arms
    e) right angled triangle
    f) angle with unequal arms
    g) line segment
    h) isosceles triangle

    (i) {g,b,d} (ii) {b,d,h} (iii) {c,d} (iv) {e,f,h} (v) {a,b}

11. Which of the following are true?

a) A figure can have multiple axes of symmetry.
b) An obtuse angled triangle has zero lines of symmetry.
c) A line segment has one line of symmetry.
d) Line of symmetry and axis of symmetry are same.
e) Line of symmetry is perpendicular to axis of symmetry.
f) A figure can be broken into two congruent shapes about its axis of symmetry.
g) Axis of symmetry of a figure need not intersect with the figure at any point.
h) For every point on the figure on one side of the axis of symmetry, there is a corresponding point on the other side.

(i) {c,d} (ii) {b,a} (iii) {a,d,f,h} (iv) {b,h,a} (v) {e,g,f}

12. Which of the following figures have two lines of symmetry?

a) square
b) rectangle
c) isosceles triangle
d) angle with equal arms
e) isosceles trapezium
f) kite
g) scalene triangle
h) line segment

(i) {c,h} (ii) {d,e,b} (iii) {b,h} (iv) {a,b} (v) {f,h,b}

13. Which of the following figures have three lines of symmetry?

a) isosceles triangle
b) isosceles right angled triangle
c) line segment
d) equilateral triangle
e) right angle triangle
f) scalene triangle

(i) {a,d} (ii) {b,d} (iii) {f,d} (iv) {d} (v) {c,e,d}

14. A median is an axis of symmetry in which of the given figures?

a) equilateral triangle
b) isosceles right angled triangle
c) isosceles triangle
d) right angle triangle
e) scalene triangle

(i) {d,a} (ii) {a,b,c} (iii) {d,a,b} (iv) {d,e,c} (v) {e,b}

15. Which of the following quadrilaterals have zero lines of symmetry?

a) kite
b) square
c) parallelogram
d) isosceles trapezium
e) rhombus
f) rectangle
g) trapezium

(i) {c,g} (ii) {f,g,c} (iii) {a,c} (iv) {d,e,c} (v) {b,g}

16. Which of the following quadrilaterals have one line of symmetry?

a) rectangle
b) kite
c) parallelogram
d) square
e) isosceles trapezium
f) trapezium
g) rhombus

(i) {b,e} (ii) {a,b} (iii) {d,f,b} (iv) {c,e} (v) {g,e,b}

17. Which of the following quadrilaterals have two lines of symmetry?

a) rectangle
b) kite
c) trapezium
d) isosceles trapezium
e) square
f) parallelogram
g) rhombus

(i) {f,g,a} (ii) {c,g} (iii) {a,g} (iv) {d,e,a} (v) {b,a}

18. Which of the following quadrilaterals have three lines of symmetry?

a) none
b) rectangle
c) rhombus
d) isosceles trapezium
e) parallelogram
f) square
g) trapezium

(i) {b,a} (ii) {f,a} (iii) {d,e,a} (iv) {a} (v) {c,a}

19. Which of the following quadrilaterals have four lines of symmetry?

a) kite
b) rhombus
c) square
d) parallelogram
e) trapezium
f) isosceles trapezium
g) rectangle

(i) {f,c} (ii) {d,e,c} (iii) {b,c} (iv) {a,c} (v) {c}

20. Which of the following are true?

a) Lines of symmetry of a regular polygon are nothing but the diagonals of a regular polygon.
b) If a quadrilateral has four lines of symmetry, then it is a regular polygon.
c) A regular polygon of n sides will have n lines of symmetry.
d) If a polygon is not regular, it will have less number of axes of symmetry than the number of sides.
e) Line of symmetry divides the polygon into two identical shapes.
f) If a triangle has two lines of symmetry, then it is a regular polygon.
g) An n-sided regular polygon has n/2 lines of symmetry if n is even.

(i) {f,e,b} (ii) {f,c} (iii) {b,c,d,e} (iv) {g,a,d} (v) {a,b}

21. Which of the following figures have point symmetry?

a) isosceles triangle
b) equilateral triangle
c) isosceles right angled triangle
d) right angle triangle
e) line segment
f) scalene triangle

(i) {c,d,e} (ii) {e} (iii) {a,e} (iv) {f,e} (v) {b,e}

22. Which of the following quadrilaterals have point symmetry?

a) parallelogram
b) isosceles trapezium
c) rhombus
d) trapezium
e) kite
f) rectangle
g) square

(i) {b,a} (ii) {d,c} (iii) {d,g,a} (iv) {a,c,f,g} (v) {e,b,f}

23. Which of the following figures have point symmetry?

a) circle
b) sector of a circle
c) regular hexagon
d) regular octagon
e) regular pentagon
f) semicircle
g) regular heptagon

(i) {b,a} (ii) {e,c} (iii) {a,c,d} (iv) {b,a,c} (v) {f,g,d}

24. Which of the following are true?

a) If a figure does not have point symmetry, it does not have rotational symmetry too.
b) If a figure does not have point symmetry, it does not have line symmetry too.
c) All regular polygons have point symmetry.
d) A circle has infinite points of symmetry.
e) If a figure has line symmetry, it also has rotational symmetry.
f) If a figure does not have line symmetry, it does not have rotational symmetry too.
g) If a figure does not have rotational symmetry, it does not have point symmetry too.

(i) {b,g} (ii) {g} (iii) {e,g} (iv) {c,d,g} (v) {a,g}

25. A figure possesses point symmetry if it regain its shape after rotating

(i) 90° (ii) 180° (iii) 360° (iv) 270°

26. A figure possesses rotational symmetry if it regain its shape after rotating

a) 360°
b) 180°
c) 90°
d) 270°

(i) {b,c,d} (ii) {a,b,c} (iii) {a,c} (iv) {a,d} (v) {a,b}

27. Which of the following are true?

a) A circle has rotational symmetry of infinite order.
b) A circle has infinite points of symmetry.
c) A polygon need not be regular to have point symmetry.
d) A polygon need not be regular to have rotational symmetry.
e) A circle has infinite lines of symmetry.

(i) {b,d} (ii) {b,a} (iii) {a,c,d,e} (iv) {b,e,a} (v) {b,c}

28. Which of the following quadrilaterals have no rotational symmetry?

a) square
b) parallelogram
c) trapezium
d) isosceles trapezium
e) kite
f) rectangle
g) rhombus

(i) {f,g,e} (ii) {a,c,d} (iii) {a,c} (iv) {c,d,e} (v) {b,d}

29. Which of the following triangles have rotational symmetry?

a) right angle triangle
b) equilateral triangle
c) isosceles triangle
d) isosceles right angled triangle
e) scalene triangle

(i) {d,e,b} (ii) {b} (iii) {c,b} (iv) {a,b}

30. Which of the following are true?

a) A rectangle has rotational symmetry of order four.
b) A parallelogram has rotational symmetry of order four.
c) A rhombus has rotational symmetry of order four.
d) A square has rotational symmetry of order four.
e) A semi-circle has rotational symmetry of order two.

(i) {c,e,d} (ii) {d} (iii) {b,d} (iv) {a,d}

31. If a figure has rotational symmetry of order 10, then it regain its shape after being rotated by an angle of

(i) 33° (ii) 31° (iii) 36° (iv) 41° (v) 39°

32. Which of the following figures neither have line symmetry nor point symmetry nor rotational symmetry?

a) scalene triangle
b) equilateral triangle
c) angle with equal arms
d) line segment
e) isosceles triangle

(i) {b,a} (ii) {c,a} (iii) {a} (iv) {d,e,a}

33. Which of the following figures have all symmetries viz. line symmetry, point symmetry and rotational symmetry?

a) circle
b) angle with equal arms
c) equilateral triangle
d) square
e) line segment
f) parallelogram
g) regular pentagon
h) regular hexagon

(i) {b,h,a} (ii) {f,g,e} (iii) {b,a} (iv) {a,d,e,h} (v) {c,d}

34. Which of the following English alphabet letters has point symmetry?

(i) N (ii) D (iii) C (iv) L (v) M

35. Which of the following English alphabet letters does not have point symmetry?

(i) Z (ii) N (iii) X (iv) H (v) D

36. Which of the following English alphabet letters has rotational symmetry?

(i) A (ii) J (iii) B (iv) H (v) M

37. Which of the following English alphabet letters does not have rotational symmetry?

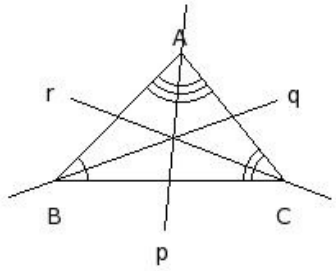
(i) N (ii) A (iii) X (iv) O (v) Z

38. Which of the following figures have infinite lines of symmetry?

a) semicircle
b) n-sided polygon where n is very large
c) sector of a circle
d) circle
e) line segment

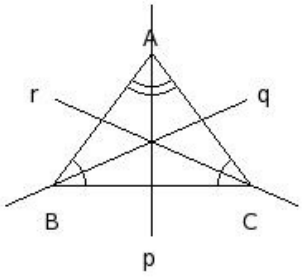
(i) {a,d} (ii) {b,d} (iii) {c,e,d} (iv) {d}

39. Identify the line(s) of symmetry in the following figure



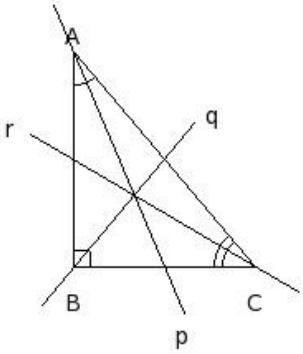
(i) none (ii) p (iii) { p, q, r } (iv) q (v) r

40. Identify the line(s) of symmetry in the following figure



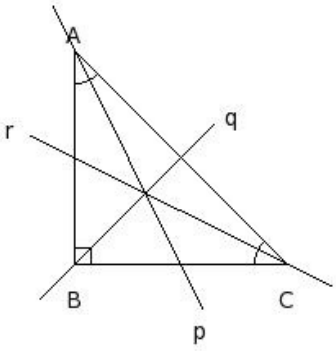
(i) p (ii) none (iii) q (iv) r (v) { p, q, r }

41. Identify the line(s) of symmetry in the following figure



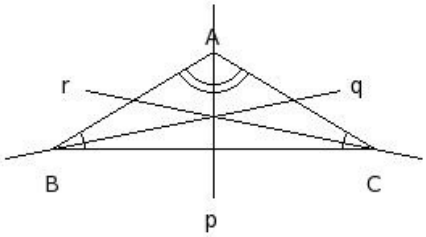
(i) { p, q, r } (ii) none (iii) r (iv) p (v) q

42. Identify the line(s) of symmetry in the following figure



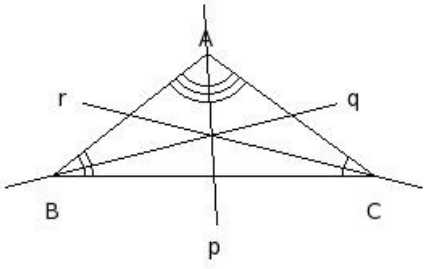
(i) p (ii) { p, q, r } (iii) r (iv) none (v) q

43. Identify the line(s) of symmetry in the following figure



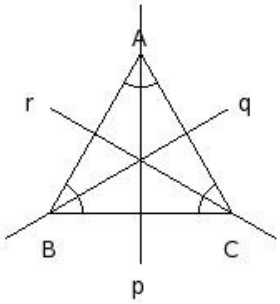
(i) q (ii) { p, q, r } (iii) r (iv) p (v) none

44. Identify the line(s) of symmetry in the following figure



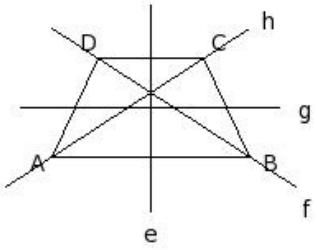
(i) none (ii) r (iii) { p, q, r } (iv) p (v) q

45. Identify the line(s) of symmetry in the following figure



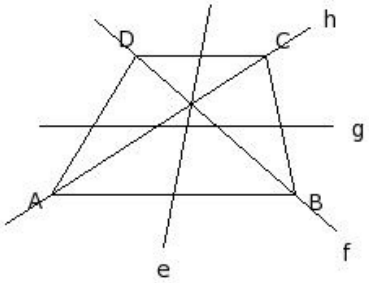
(i) none (ii) q (iii) p (iv) { p, q, r } (v) r

46. Which of the following are line(s) of symmetry for the given isosceles trapezium?



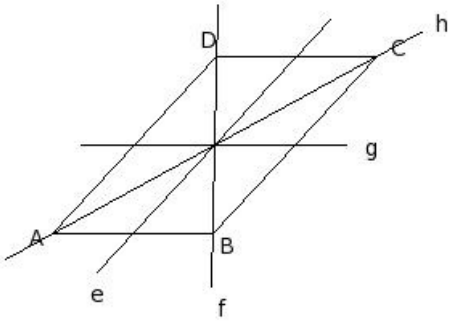
(i) { f, h } (ii) { e, g } (iii) e (iv) f (v) { e, f, g, h }

47. Which of the following are line(s) of symmetry for the given trapezium?



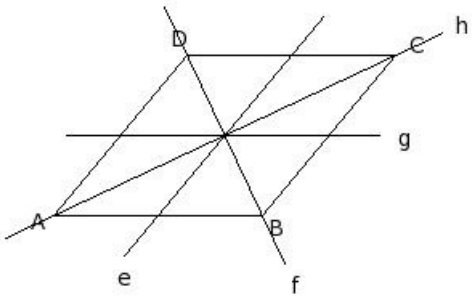
(i) e (ii) none (iii) f (iv) { f, h } (v) g

48. Which of the following are line(s) of symmetry for the given parallelogram?



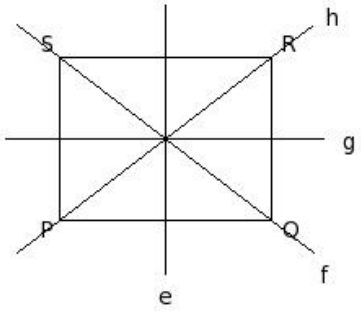
(i) f (ii) e (iii) { e, f, g, h } (iv) none (v) { e, g }

49. Which of the following are line(s) of symmetry for the given rhombus?



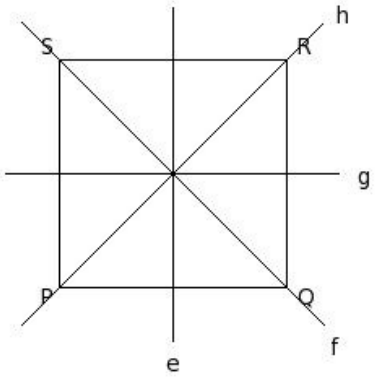
(i) { e, g } (ii) { f, h } (iii) h (iv) e (v) f

50. Which of the following are line(s) of symmetry for the given rectangle?



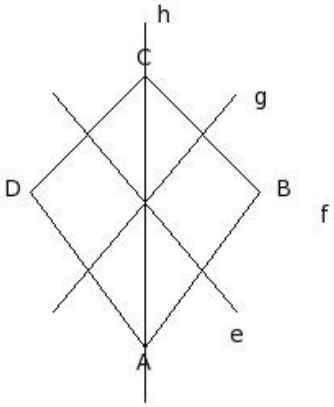
(i) h (ii) { e, g } (iii) none (iv) { f, h } (v) e

51. Which of the following are line(s) of symmetry for the given square?



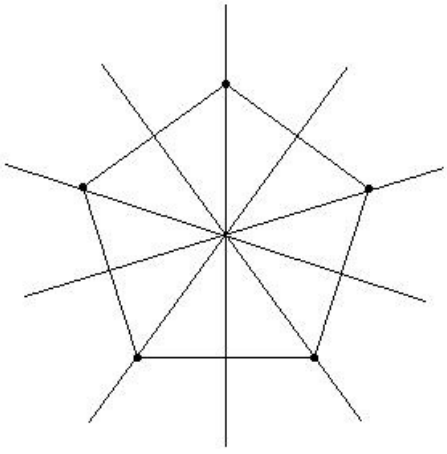
(i) h (ii) none (iii) { e, f, g, h } (iv) { e, g } (v) g

52. Which of the following are line(s) of symmetry for the given kite?



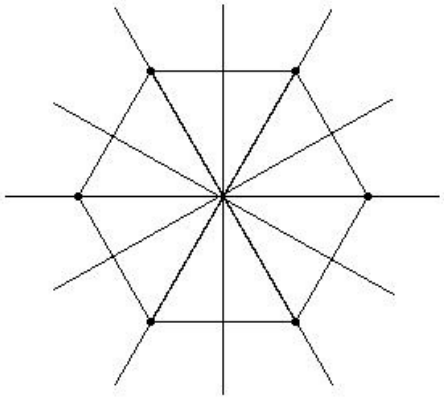
(i) { e, f, g, h } (ii) { e, g } (iii) none (iv) h (v) g

53. Given figure has how many lines of symmetry?



(i) 4 (ii) 2 (iii) 5 (iv) 8 (v) 6

54. Given figure has how many lines of symmetry?



(i) 9 (ii) 6 (iii) 5 (iv) 3 (v) 7

Assignment Key

1) (iii)	2) (v)	3) (iv)	4) (iii)	5) (iii)	6) (i)
7) (ii)	8) (ii)	9) (iii)	10) (ii)	11) (iii)	12) (iii)
13) (iv)	14) (ii)	15) (i)	16) (i)	17) (iii)	18) (iv)
19) (v)	20) (iii)	21) (ii)	22) (iv)	23) (iii)	24) (ii)
25) (ii)	26) (i)	27) (iii)	28) (iv)	29) (ii)	30) (ii)
31) (iii)	32) (iii)	33) (iv)	34) (i)	35) (v)	36) (iv)
37) (ii)	38) (iv)	39) (i)	40) (i)	41) (ii)	42) (v)
43) (iv)	44) (i)	45) (iv)	46) (iii)	47) (ii)	48) (iv)
49) (ii)	50) (ii)	51) (iii)	52) (iv)	53) (iii)	54) (ii)