EduSahara™ Assignment

Name : Symmetry

Chapter : Exploring Geometrical Figures

Grade : SSC Grade VIII

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

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

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

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

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

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

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

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

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

   (i) G (ii) E (iii) X (iv) J (v) H

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

   (i) J (ii) H (iii) C (iv) B (v) S

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

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

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

   (i) X (ii) H (iii) T (iv) J (v) U

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

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

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

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

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

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

11. Which of the following are true?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20. Which of the following are true?

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

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

21. Which of the following figures have point symmetry?

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

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

22. Which of the following quadrilaterals have point symmetry?

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

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

23. Which of the following figures have point symmetry?

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

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

24. Which of the following are true?

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

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

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

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

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

a) 360°
b) 180°
c) 270°
d) 90°

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

27. Which of the following are true?

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

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

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

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

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

29. Which of the following triangles have rotational symmetry?

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

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

30. Which of the following are true?

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

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

31. If a figure has rotational symmetry of order 6, then it regain its shape after being rotated by an angle of

(i) 57° (ii) 60° (iii) 55° (iv) 65° (v) 63°

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

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

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

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

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

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

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

(i) H (ii) C (iii) B (iv) D (v) E

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

(i) O (ii) H (iii) N (iv) I (v) A

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

(i) F (ii) C (iii) D (iv) A (v) I

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

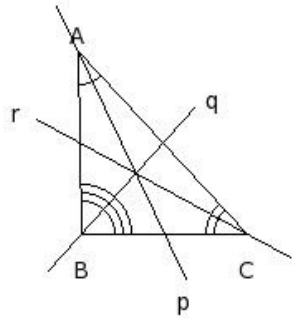
(i) S (ii) I (iii) A (iv) Z (v) X

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

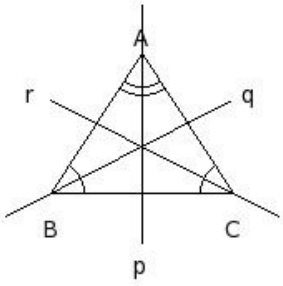
(i) {c,e,d} (ii) {b,d} (iii) {d} (iv) {a,d}

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



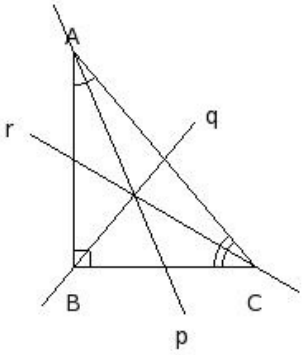
(i) q (ii) none (iii) p (iv) { p, q, r } (v) r

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



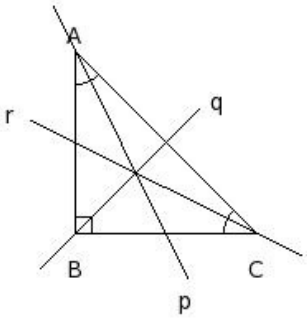
(i) p (ii) r (iii) none (iv) { p, q, r } (v) q

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



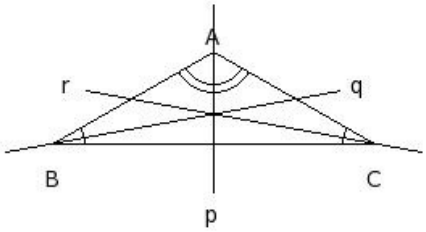
(i) p (ii) r (iii) q (iv) none (v) { p, q, r }

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



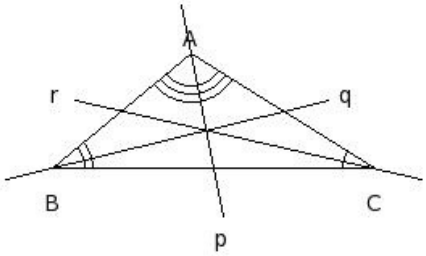
(i) p (ii) { p, q, r } (iii) q (iv) r (v) none

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



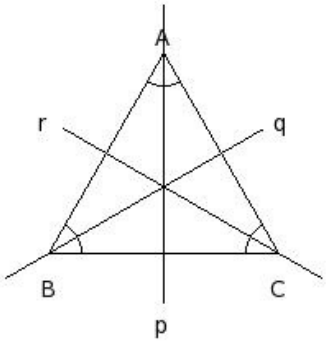
(i) q (ii) p (iii) { p, q, r } (iv) none (v) r

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



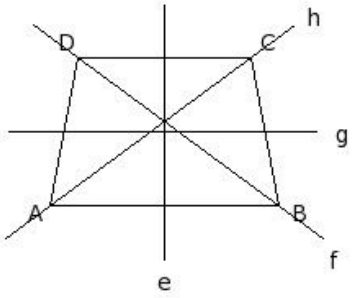
(i) { p, q, r } (ii) q (iii) none (iv) p (v) r

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



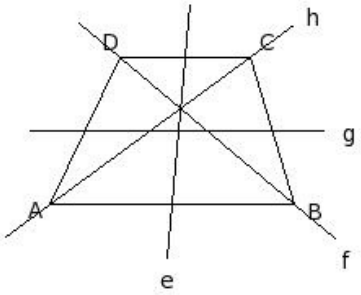
(i) r (ii) { p, q, r } (iii) none (iv) p (v) q

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



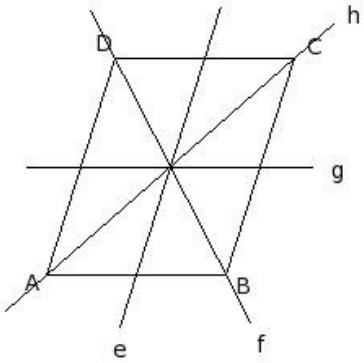
(i) e (ii) h (iii) f (iv) { e, g } (v) none

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



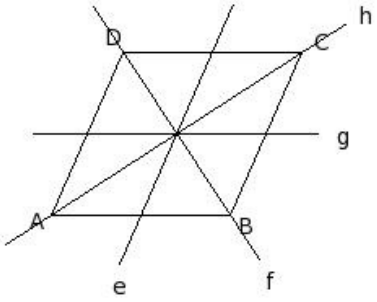
(i) e (ii) none (iii) { e, f, g, h } (iv) g (v) f

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



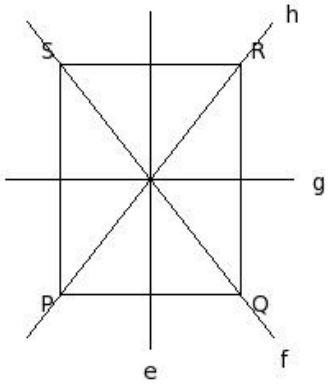
(i) { e, f, g, h } (ii) { e, g } (iii) f (iv) none (v) g

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



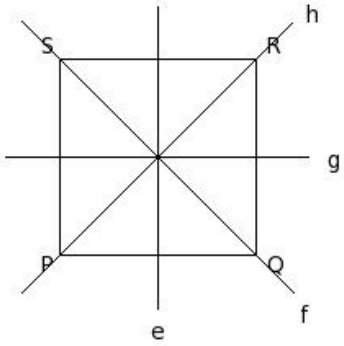
(i) f (ii) { f, h } (iii) none (iv) { e, f, g, h } (v) { e, g }

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



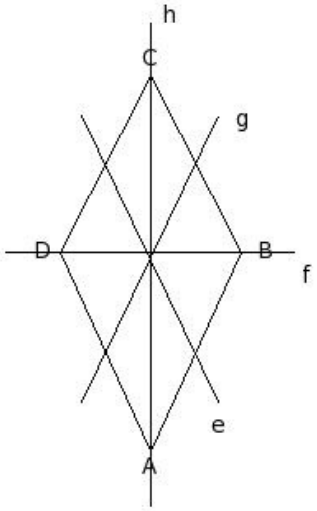
(i) f (ii) g (iii) h (iv) none (v) { e, g }

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



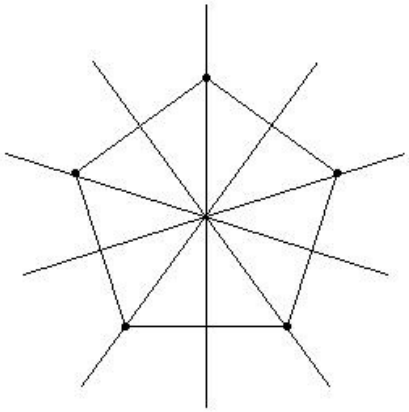
(i) f (ii) h (iii) none (iv) e (v) { e, f, g, h }

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



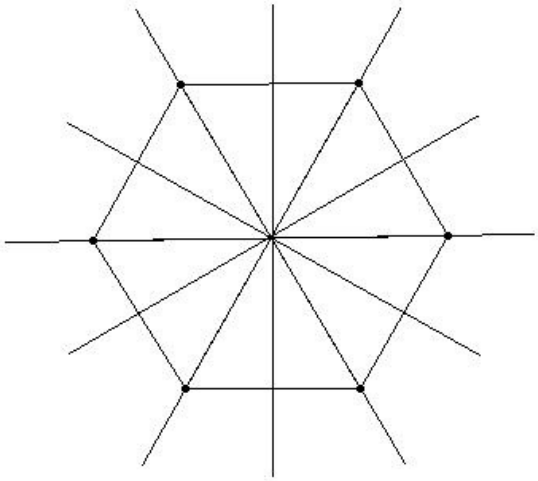
(i) h (ii) f (iii) e (iv) g (v) { f, h }

53. Given figure has how many lines of symmetry?



(i) 6 (ii) 4 (iii) 2 (iv) 7 (v) 5

54. Given figure has how many lines of symmetry?



(i) 4 (ii) 8 (iii) 6 (iv) 7 (v) 5

Assignment Key

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