



1. Which of the following figures have point symmetry?

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

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

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

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

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

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

(i) D (ii) G (iii) W (iv) N (v) H

4. Find the image of the rectangle formed by $((-1),(-5)), (6,(-5)), (6,(-1))$ and $((-1),(-1))$ when rotated about the origin by 90°

- (i) $(5,(-1)), (5,6), (2,5), (1,(-1))$ (ii) $(5,(-1)), (5,6), (1,6), (0,0)$ (iii) $(5,(-1)), (5,6), ((-1),4), (1,(-1))$
(iv) $(7,1), (5,6), (1,6), (1,(-1))$ (v) $(5,(-1)), (5,6), (1,6), (1,(-1))$

5. Write down the coordinates when reflected in the x-axis $(6,(-8)), (4,(-7)), ((-3),4), (2,8)$

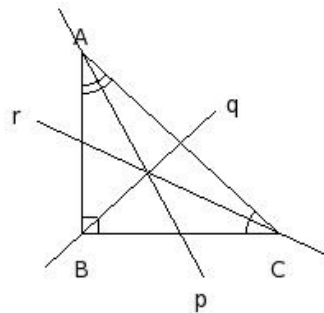
- (i) $(8,10), (4,7), ((-3),(-4)), (2,(-8))$ (ii) $(6,8), (4,7), ((-5),(-6)), (2,(-8))$
(iii) $(6,8), (4,7), ((-3),(-4)), (1,(-7))$ (iv) $(6,8), (4,7), ((-2),(-5)), (2,(-8))$
(v) $(6,8), (4,7), ((-3),(-4)), (2,(-8))$

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

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

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

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



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

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

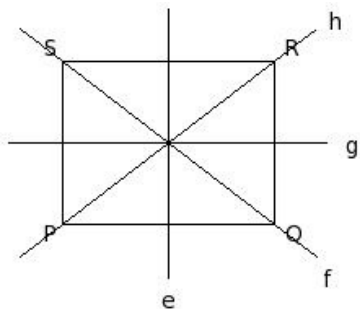
(i) zero (ii) two (iii) one (iv) three (v) infinite

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

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

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

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



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

11. Which of the following points is invariant under reflection in y-axis

(i) (1,(-8)) (ii) (2,8) (iii) ((-5),3) (iv) (0,(-1)) (v) ((-2),(-2))

12. Find the image of the triangle formed by $((-8),2)$, $(3,8)$ and $(2,(-2))$ when rotated about the origin by 90°

- (i) $((-2),(-8))$, $((-6),5)$, $(2,2)$ (ii) $((-2),(-8))$, $((-8),3)$, $(3,1)$ (iii) $((-3),(-7))$, $((-8),3)$, $(2,2)$
(iv) $((-2),(-8))$, $((-8),3)$, $(2,2)$ (v) $((-2),(-8))$, $((-8),3)$, $(0,0)$

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

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

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

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

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

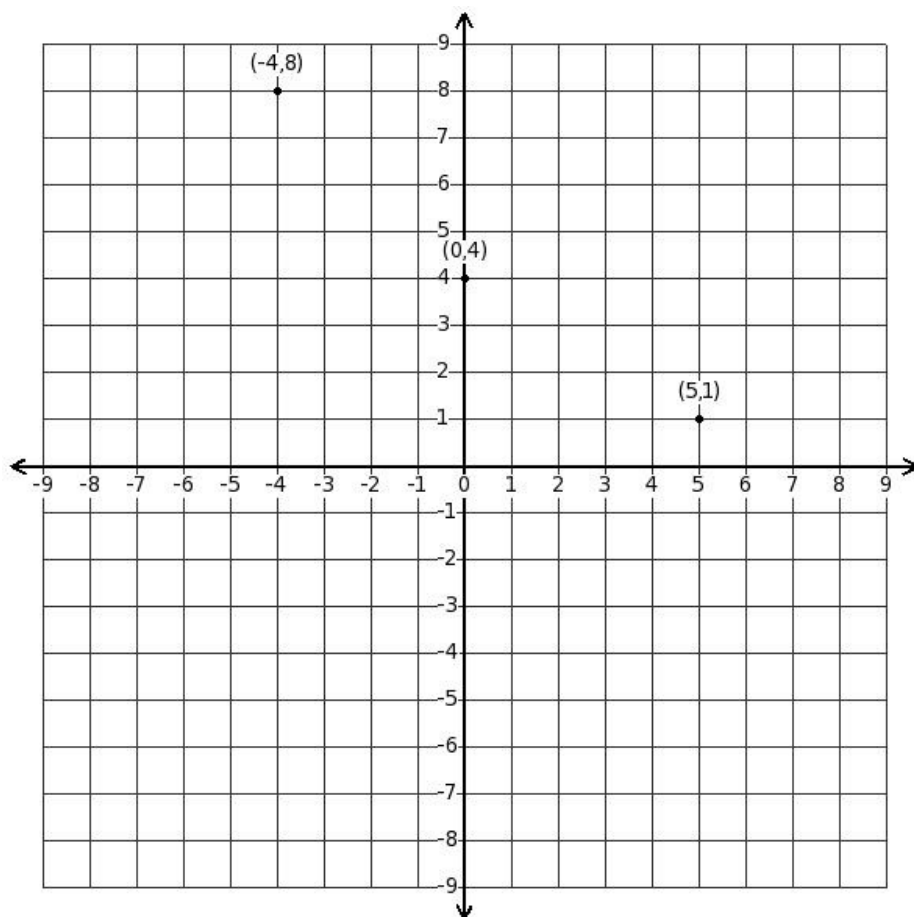
- (i) $\{c,d\}$ (ii) $\{a,c\}$ (iii) $\{g,d,c\}$ (iv) $\{e,f,c\}$ (v) $\{b,d\}$

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

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

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

16. Write down the coordinates when reflected in the x-axis



- (i) $(5, (-1)), ((-4), (-8)), ((-2), (-6))$ (ii) $(4, 0), ((-4), (-8)), (0, (-4))$ (iii) $(5, (-1)), ((-2), (-6)), (0, (-4))$
 (iv) $(5, (-1)), ((-4), (-8)), (0, (-4))$ (v) $(5, (-1)), ((-4), (-8)), (1, (-5))$

17. Find the image of the point $A((-5), (-4))$ under the reflection of a point $P((-1), \frac{3}{2})$

- (i) $(4, 6)$ (ii) $(2, 8)$ (iii) $(3, 7)$ (iv) $(5, 9)$ (v) $(1, 5)$

18. Which of the following are true?

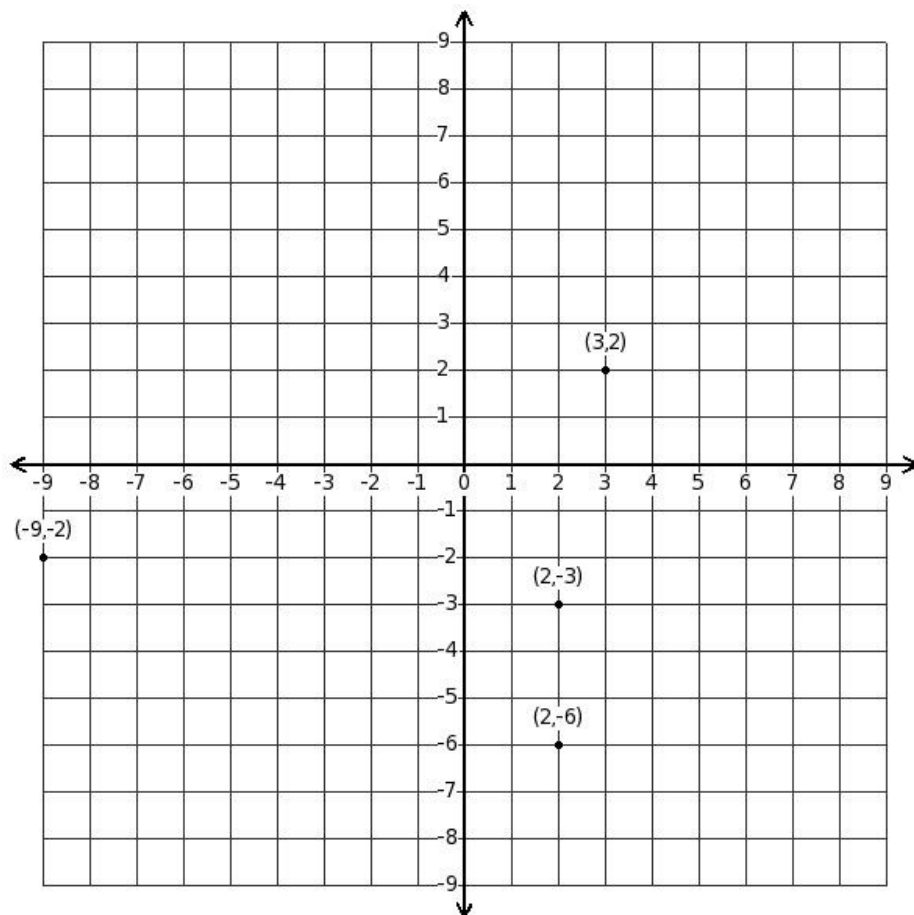
- a) A regular polygon of n sides will have n lines of symmetry.
- b) Line of symmetry divides the polygon into two identical shapes.
- c) If a polygon is not regular, it will have less number of axes of symmetry than the number of sides.
- d) If a triangle has two lines of symmetry, then it is a regular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

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

19. Find the image of the point $(7, (-1))$ when reflected in x-axis

- (i) $(7, 1)$ (ii) $((-7), 1)$ (iii) $(8, 1)$ (iv) $((-7), (-1))$ (v) $(1, 7)$

20. Write down the coordinates when reflected in the origin



- (i) $((-1), 0), (9, 2), ((-2), 3), ((-2), 6)$ (ii) $((-3), (-2)), (9, 2), ((-4), 1), ((-2), 6)$
 (iii) $((-3), (-2)), (9, 2), ((-1), 2), ((-2), 6)$ (iv) $((-3), (-2)), (9, 2), ((-2), 3), ((-3), 7)$
 (v) $((-3), (-2)), (9, 2), ((-2), 3), ((-2), 6)$

21. Find the image of the rectangle formed by $((-3), (-2)), (5, (-2)), (5, 2)$ and $((-3), 2)$ when rotated about the origin by 180°

- (i) $(5, 4), ((-5), 2), ((-5), (-2)), (3, (-2))$ (ii) $(3, 2), ((-5), 2), ((-4), (-3)), (3, (-2))$
 (iii) $(3, 2), ((-5), 2), ((-7), (-4)), (3, (-2))$ (iv) $(3, 2), ((-5), 2), ((-5), (-2)), (3, (-2))$
 (v) $(3, 2), ((-5), 2), ((-5), (-2)), (2, (-1))$

22. Find the image of the triangle formed by $((-3), (-3)), (0, 8)$ and $((-4), 5)$ when rotated about the origin by 180°

- (i) $(3, 3), (0, (-8)), (4, (-5))$ (ii) $(3, 3), (2, (-6)), (4, (-5))$ (iii) $(2, 4), (0, (-8)), (4, (-5))$
 (iv) $(3, 3), (0, (-8)), (5, (-6))$ (v) $(3, 3), (0, (-8)), (2, (-7))$

23. Find the new position of point $((-4), (-6))$ when rotated through 180° clockwise about the origin

- (i) $((-4), (-6))$ (ii) $(4, (-6))$ (iii) $(4, 6)$ (iv) $((-4), 6)$ (v) $(6, 4)$

24. Write down the coordinates when reflected in the origin $((-2), 4), ((-6), (-7)), ((-2), (-8))$

- (i) $(2, (-4)), (6, 7), (0, 6)$ (ii) $(2, (-4)), (6, 7), (2, 8)$ (iii) $(1, (-3)), (6, 7), (2, 8)$ (iv) $(2, (-4)), (6, 7), (3, 7)$
 (v) $(2, (-4)), (8, 9), (2, 8)$

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

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

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

Assignment Key

1) (i)	2) (i)	3) (v)	4) (v)	5) (v)	6) (ii)
7) (iii)	8) (v)	9) (v)	10) (iii)	11) (iv)	12) (iv)
13) (iv)	14) (i)	15) (iii)	16) (iv)	17) (iii)	18) (iv)
19) (i)	20) (v)	21) (iv)	22) (i)	23) (iii)	24) (ii)
25) (iv)					