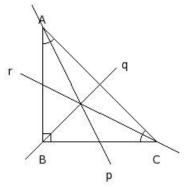
Name : Chapter Based Worksheet

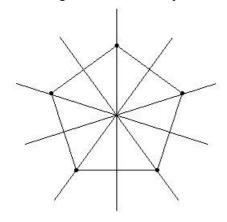
Chapter : Symmetry
Grade : ICSE Grade X

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- 1. Which of the following quadrilaterals have four lines of symmetry?
  - a) trapezium
  - b) isosceles trapezium
  - c) square
  - d) parallelogram
  - e) kite
  - f) rhombus
  - g) rectangle
  - (i)  $\{a,c\}$  (ii)  $\{c\}$  (iii)  $\{f,c\}$  (iv)  $\{d,e,c\}$  (v)  $\{b,c\}$
- 2. Identify the line(s) of symmetry in the following figure



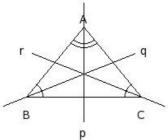
- (i)  $\{p,q,r\}$  (ii) none (iii) p (iv) r (v) q
- 3. Given figure has how many lines of symmetry?



- (i) 8 (ii) 4 (iii) 5 (iv) 3 (v) 6
- 4. Which of the following figures have no line of symmetry?
  - a) line segment
  - b) scalene triangle
  - c) angle with unequal arms
  - d) angle with equal arms
  - e) equilateral triangle
  - f) isosceles triangle
  - (i) {b,c} (ii) {d,c} (iii) {a,c,b} (iv) {e,f,b} (v) {a,b}

| 5. The English alphabet letter 'H' has how many lines of symmetry?  (i) two (ii) infinite (iii) zero (iv) three (v) one   |
|---|
| <ul> <li>6. Which of the following figures have three lines of symmetry?</li> <li>a) isosceles triangle</li> <li>b) right angle triangle</li> <li>c) scalene triangle</li> <li>d) line segment</li> <li>e) equilateral triangle</li> <li>f) isosceles right angled triangle</li> <li>(i) {a,e} (ii) {f,e} (iii) {c,d,e} (iv) {e} (v) {b,e}</li> </ul> |
| 7. The English alphabet letter 'E' has how many lines of symmetry?  (i) three (ii) two (iii) infinite (iv) zero (v) one   |
| 8. Identify the line(s) of symmetry in the following figure  r  g  g  (i) { p q r } (ii) q (iii) p (iv) page (v) r  |



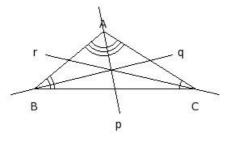


(i) p (ii) none (iii) q (iv) r (v)  $\{p,q,r\}$ 

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

- a) parallelogram
- b) isosceles trapezium
- c) square
- d) rhombus
- e) trapezium
- f) rectangle
- g) kite
- (i)  $\{c,e\}$  (ii)  $\{g,e,a\}$  (iii)  $\{a,e\}$  (iv)  $\{d,f,a\}$  (v)  $\{b,a\}$

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



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

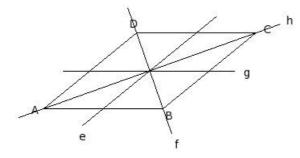
12. Which of the following English alphabet letters have one line of symmetry?

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

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

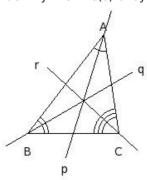
(i) R (ii) D (iii) A (iv) S (v) H

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



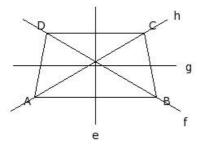
(i) none (ii)  $\{e, f, g, h\}$  (iii) g (iv)  $\{f, h\}$  (v) h

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



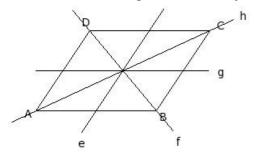
(i) p (ii) none (iii) r (iv) q (v)  $\{p,q,r\}$ 

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



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

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



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

18. Which of the following are true?

- a) A figure can have multiple axes of symmetry.
- b) A figure can be broken into two congruent shapes about its axis of symmetry.
- c) Line of symmetry and axis of symmetry are same.
- d) Line of symmetry is perpendicular to axis of symmetry.
- e) A line segment has one line of symmetry.
- f) Axis of symmetry of a figure need not intersect with the figure at any point.
- g) An obtuse angled triangle has zero lines of symmetry.
- 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)  $\{e,b\}$  (ii)  $\{d,a\}$  (iii)  $\{d,h,a\}$  (iv)  $\{a,b,c,h\}$  (v)  $\{f,g,c\}$ 

19. The English alphabet letter 'G' has how many lines of symmetry?

- (i) infinite (ii) three (iii) one (iv) zero (v) two
- 20. The English alphabet letter 'O' has how many lines of symmetry?

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

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

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

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

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

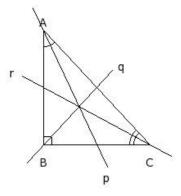
(i) U (ii) B (iii) X (iv) G (v) I

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

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

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

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



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

## 25. Which of the following quadrilaterals have three lines of symmetry?

- a) parallelogram
- b) rhombus
- c) rectangle
- d) isosceles trapezium
- e) none
- f) square
- g) trapezium
- (i)  $\{e\}$  (ii)  $\{c,d,e\}$  (iii)  $\{b,e\}$  (iv)  $\{f,e\}$  (v)  $\{a,e\}$

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

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