



1. Find the image of the point  $(-5, 5)$  when reflected in x-axis

- (i)  $(-5, -5)$  (ii)  $(5, 5)$  (iii)  $(-4, -5)$  (iv)  $(5, -5)$

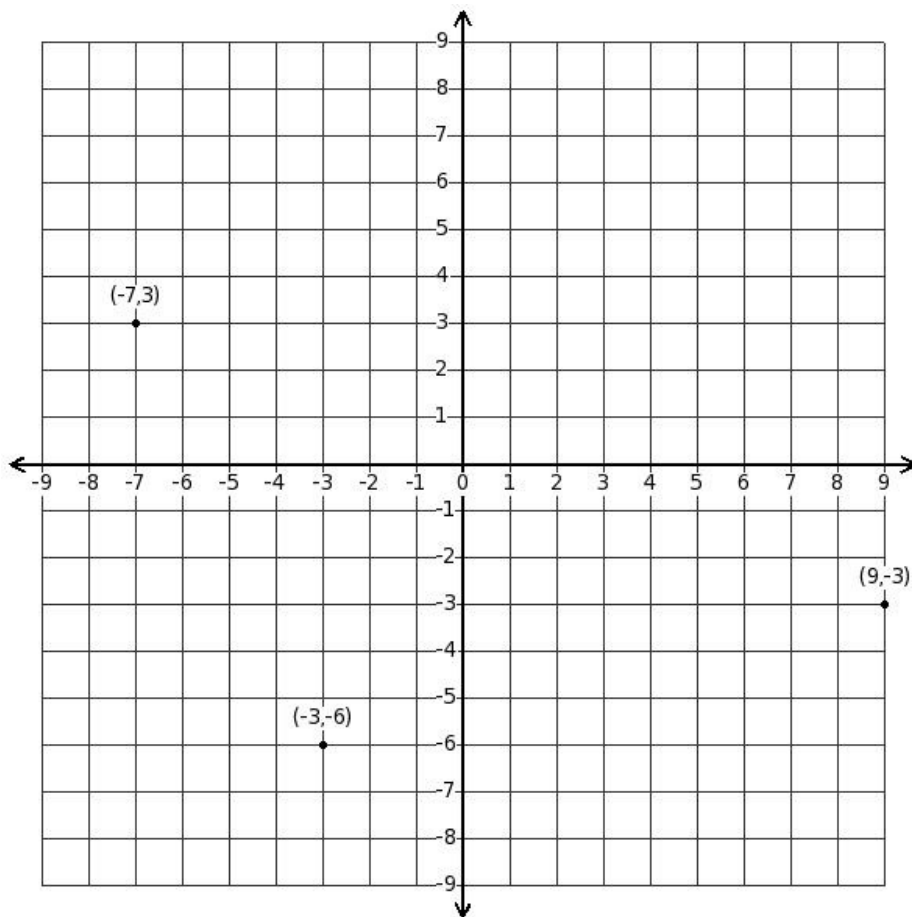
2. Find the image of the point  $(0, 5)$  when reflected in y-axis

- (i)  $(0, 5)$  (ii)  $(1, 5)$  (iii)  $(0, -5)$  (iv)  $(5, 0)$

3. Find the image of the point  $(4, -6)$  when reflected in the origin

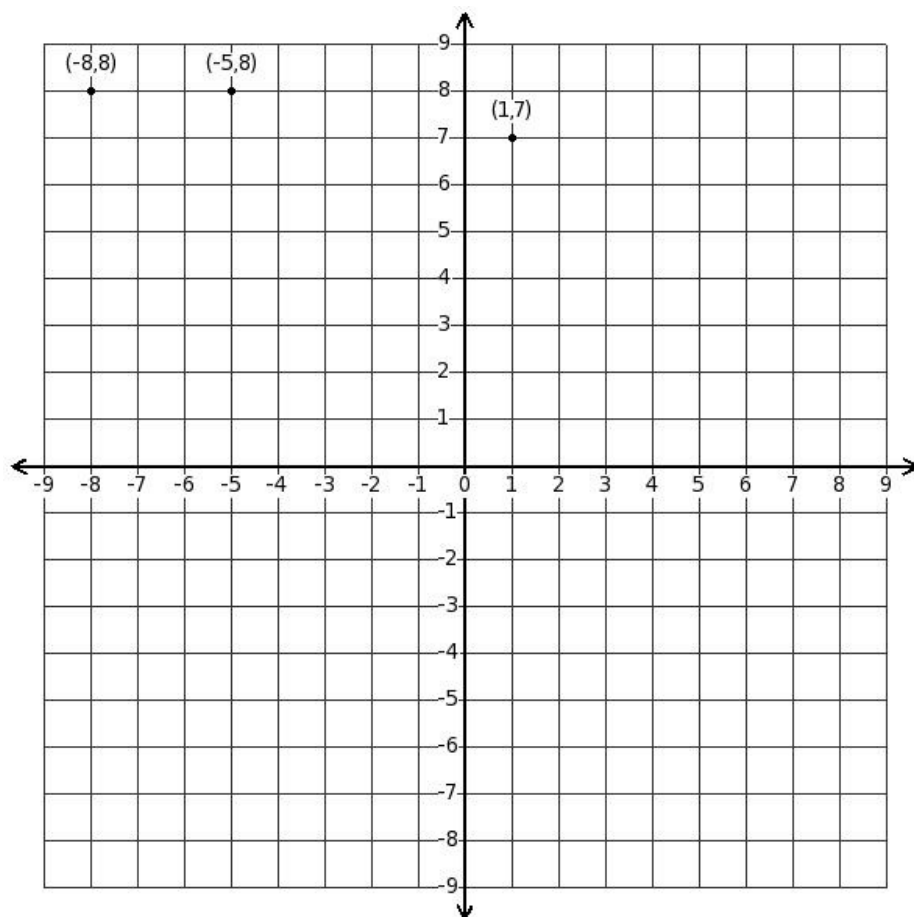
- (i)  $(4, 6)$  (ii)  $(-3, 6)$  (iii)  $(-4, 6)$  (iv)  $(-4, -6)$  (v)  $(6, -4)$

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



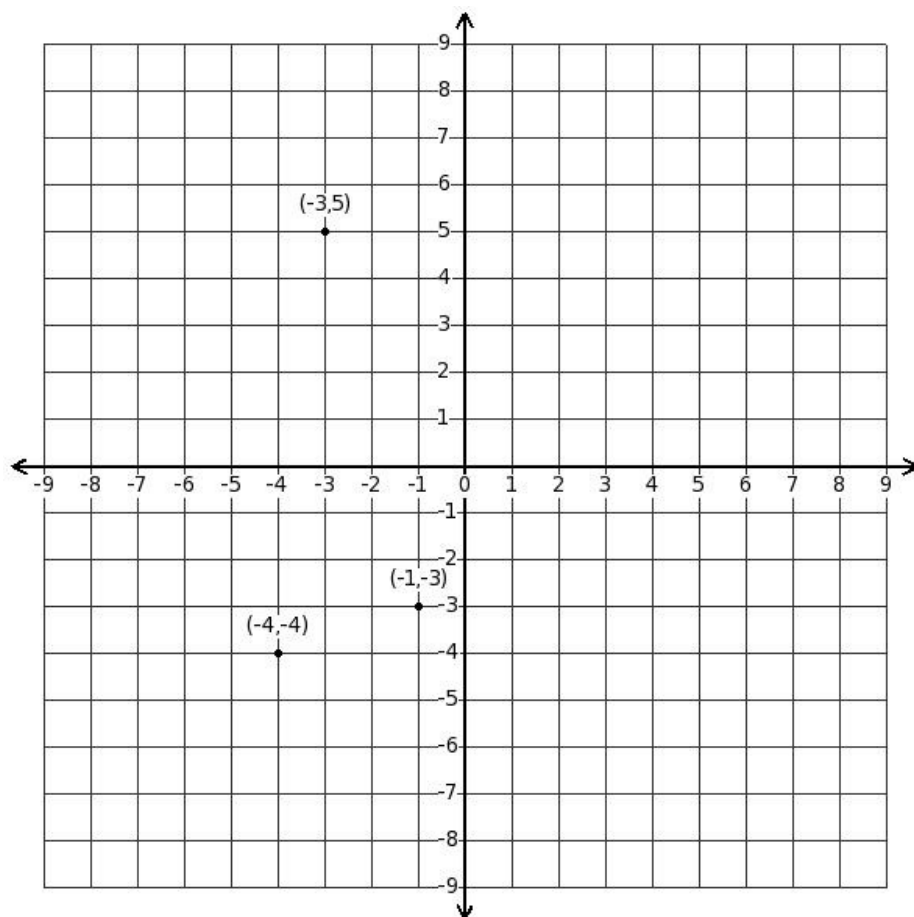
- (i)  $(9, 3), (-3, 6), (-9, -5)$  (ii)  $(9, 3), (-1, 8), (-7, -3)$  (iii)  $(8, 4), (-3, 6), (-7, -3)$   
(iv)  $(9, 3), (-3, 6), (-6, -4)$  (v)  $(9, 3), (-3, 6), (-7, -3)$

5. Write down the coordinates when reflected in the y-axis



- (i)  $((-1), 7), (5, 8), (6, 6)$  (ii)  $((-1), 7), (7, 10), (8, 8)$  (iii)  $((-2), 8), (5, 8), (8, 8)$  (iv)  $((-1), 7), (5, 8), (8, 8)$   
(v)  $((-1), 7), (5, 8), (9, 7)$

6. Write down the coordinates when reflected in the origin



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

7. Write down the coordinates when reflected in the x-axis  $(7, 2), (0, (-6)), (3, 0)$

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

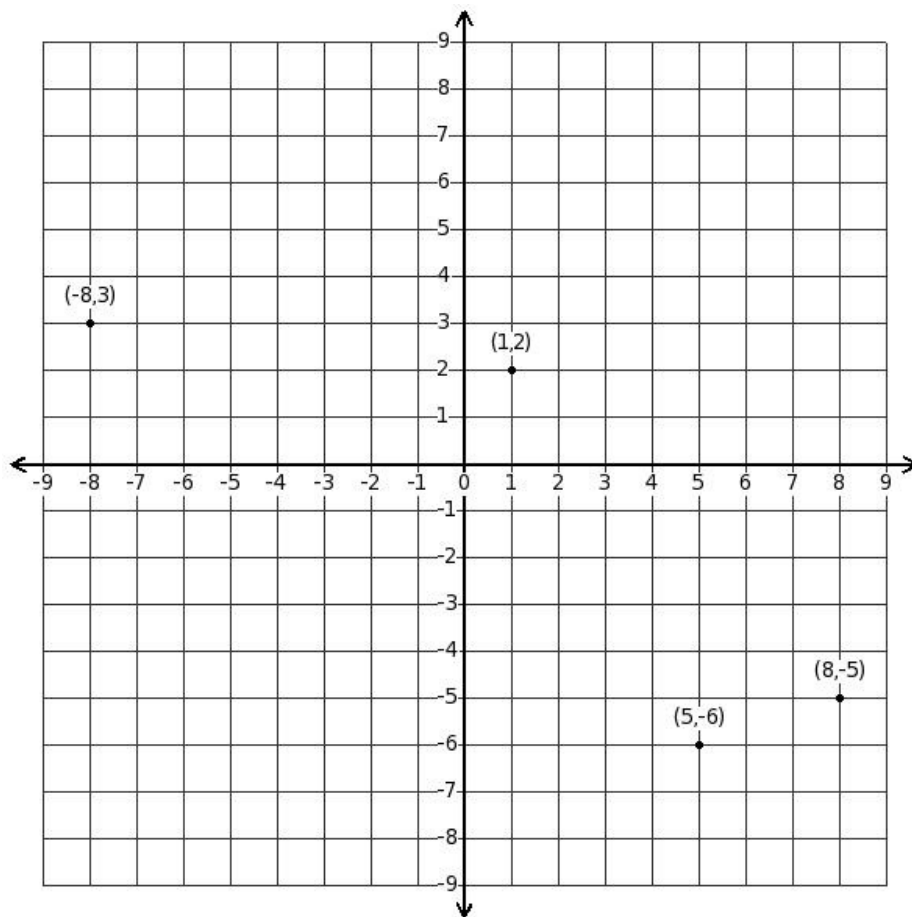
8. Write down the coordinates when reflected in the y-axis  $(5, 2), ((-5), (-9)), ((-5), (-3))$

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

9. Write down the coordinates when reflected in the origin  $((-3), (-9)), (0, 0), ((-6), 2)$

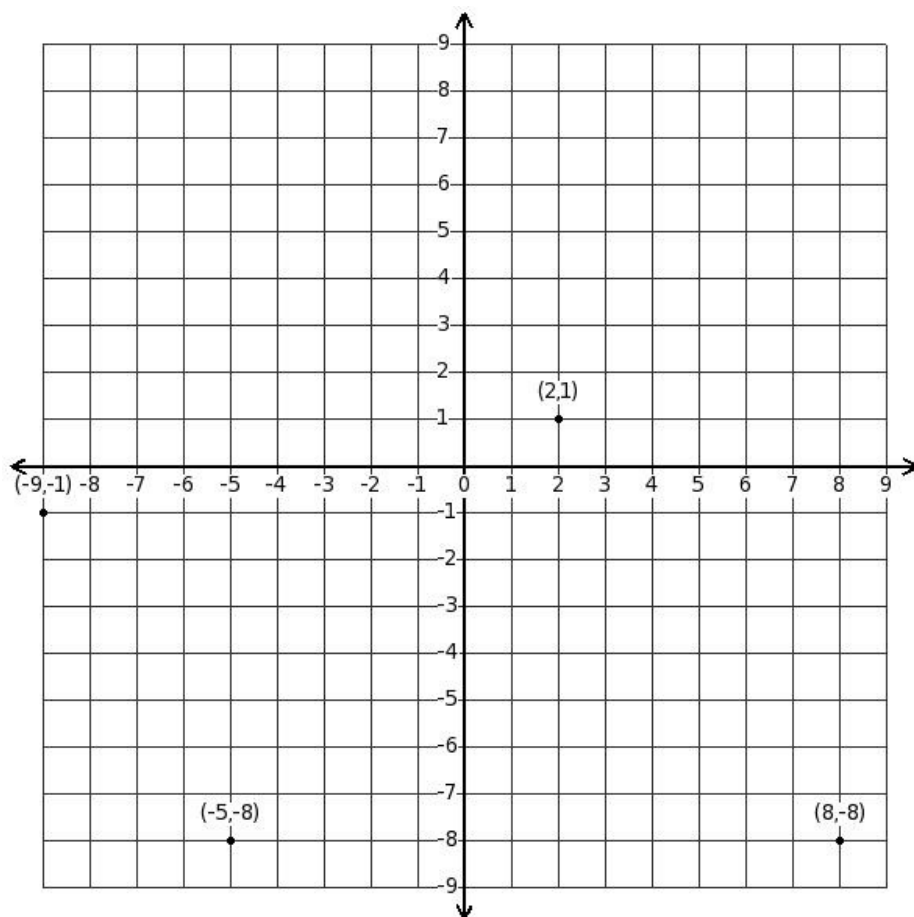
- (i)  $(3, 9), (0, 0), (6, (-2))$  (ii)  $(2, 10), (0, 0), (6, (-2))$  (iii)  $(3, 9), (2, 2), (6, (-2))$  (iv)  $(3, 9), (0, 0), (7, (-3))$   
 (v)  $(3, 9), (0, 0), (4, (-4))$

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



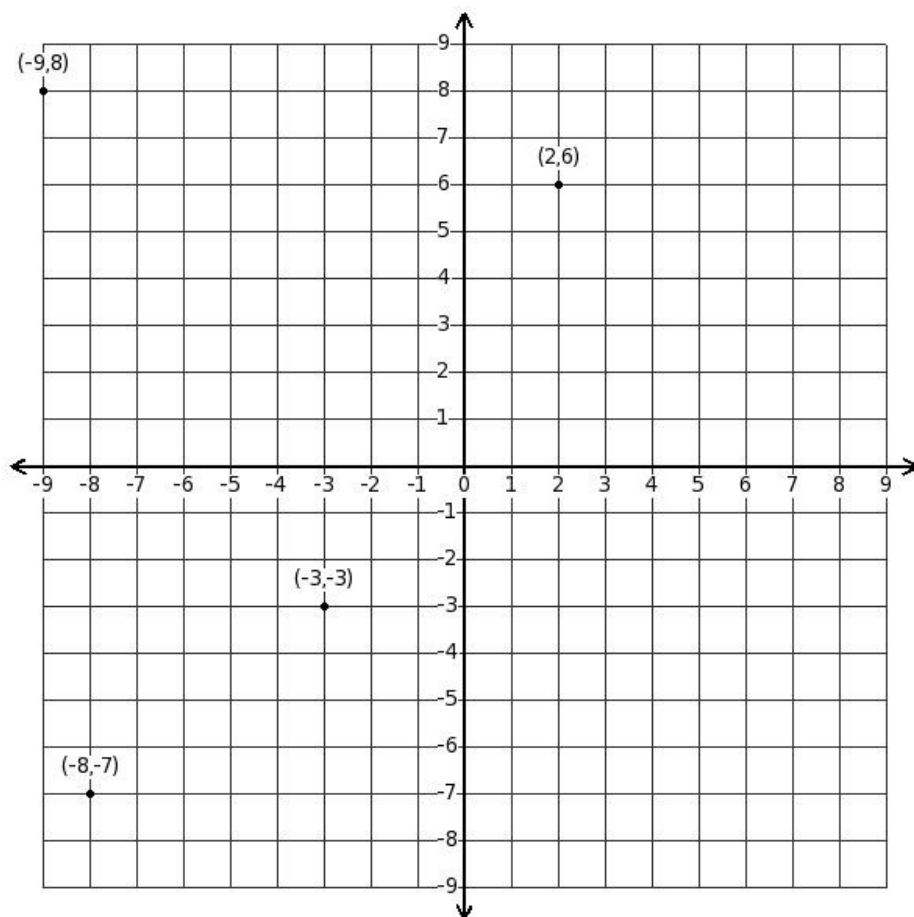
- (i)  $((-8), (-3)), (8, 5), (5, 6), (0, (-1))$  (ii)  $((-8), (-3)), (8, 5), (3, 4), (1, (-2))$   
(iii)  $((-6), (-1)), (8, 5), (5, 6), (1, (-2))$  (iv)  $((-8), (-3)), (8, 5), (6, 5), (1, (-2))$   
(v)  $((-8), (-3)), (8, 5), (5, 6), (1, (-2))$

11. Write down the coordinates when reflected in the y-axis



- (i)  $(9, (-1)), (5, (-8)), ((-4), (-1)), ((-8), (-8))$  (ii)  $(9, (-1)), (5, (-8)), ((-2), 1), ((-8), (-8))$   
 (iii)  $(11, 1), (5, (-8)), ((-2), 1), ((-8), (-8))$  (iv)  $(9, (-1)), (5, (-8)), ((-2), 1), ((-9), (-7))$   
 (v)  $(9, (-1)), (5, (-8)), ((-1), 0), ((-8), (-8))$

12. Write down the coordinates when reflected in the origin



- (i)  $(9, (-8)), (8, 7), ((-2), (-6)), (2, 4)$  (ii)  $(11, (-6)), (8, 7), ((-2), (-6)), (3, 3)$   
 (iii)  $(9, (-8)), (8, 7), ((-1), (-7)), (3, 3)$  (iv)  $(9, (-8)), (8, 7), ((-4), (-8)), (3, 3)$   
 (v)  $(9, (-8)), (8, 7), ((-2), (-6)), (3, 3)$

13. Write down the coordinates when reflected in the x-axis  $((-9), 7), (2, 7), ((-7), 6), (5, 5)$

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

14. Write down the coordinates when reflected in the y-axis  $(7, (-7)), (8, 5), ((-8), 7), (7, 3)$

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

15. Write down the coordinates when reflected in the origin  $((-4), (-3)), (7, (-7)), ((-6), (-1)), (9, (-4))$

- (i)  $(6, 5), ((-7), 7), (6, 1), ((-9), 4)$  (ii)  $(4, 3), ((-7), 7), (4, (-1)), ((-9), 4)$  (iii)  $(4, 3), ((-7), 7), (6, 1), ((-9), 4)$   
 (iv)  $(4, 3), ((-7), 7), (6, 1), ((-10), 5)$  (v)  $(4, 3), ((-7), 7), (7, 0), ((-9), 4)$

16. Find the coordinates of the reflection of the point  $(2, (-5))$  in line  $(2y + 14) = 0$

- (i)  $(0, (-11))$  (ii)  $(1, (-8))$  (iii)  $(3, (-10))$  (iv)  $(2, (-9))$  (v)  $(4, (-7))$

17. Find the coordinates of the reflection of the point  $((-6), 6)$  in line  $(7x + 49) = 0$

- (i)  $((-7), 5)$  (ii)  $((-8), 6)$  (iii)  $((-10), 4)$  (iv)  $((-9), 7)$  (v)  $((-6), 8)$

18. Which of the following points is invariant under reflection in x-axis

- (i)  $(9, -5)$  (ii)  $(-4, 9)$  (iii)  $(6, 0)$  (iv)  $(8, 2)$  (v)  $(-2, -7)$

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

- (i)  $(7, -8)$  (ii)  $(-8, 9)$  (iii)  $(0, -3)$  (iv)  $(-3, -5)$  (v)  $(7, 3)$

20. Find the image of the point  $A(0, -4)$  under the reflection of a point  $P(2, -4)$

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

21. Find the coordinates of the point  $(-2, -2)$  when reflected in x-axis followed by reflection in y-axis

- (i)  $(-2, 2)$  (ii)  $(2, -2)$  (iii)  $(2, 2)$  (iv)  $(-2, -2)$

22. Find the coordinates of the point  $(1, 4)$  when reflected in x-axis followed by reflection in origin

- (i)  $(-1, -4)$  (ii)  $(1, -4)$  (iii)  $(-1, 4)$  (iv)  $(1, 4)$  (v)  $(4, -1)$

23. Find the coordinates of the point  $(-1, -6)$  when reflected in y-axis and followed by reflection in x-axis

- (i)  $(1, -6)$  (ii)  $(-1, 6)$  (iii)  $(1, 6)$  (iv)  $(-1, -6)$  (v)  $(6, 1)$

24. Find the coordinates of the point  $(-5, 3)$  when reflected in y-axis followed by reflection in origin

- (i)  $(-5, 3)$  (ii)  $(-5, -3)$  (iii)  $(-3, -5)$  (iv)  $(5, 3)$  (v)  $(5, -3)$

25. Find the coordinates of the point  $(-5, 3)$  when reflected in origin followed by reflection in x-axis

- (i)  $(5, -3)$  (ii)  $(-5, -3)$  (iii)  $(5, 3)$  (iv)  $(-5, 3)$  (v)  $(3, 5)$

26. Find the coordinates of the point  $(2, 3)$  when reflected in origin followed by reflection in y-axis

- (i)  $(-3, 2)$  (ii)  $(2, 3)$  (iii)  $(2, -3)$  (iv)  $(-2, 3)$  (v)  $(-2, -3)$

## Assignment Key

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| 1) (i)    | 2) (i)    | 3) (iii)  | 4) (v)    | 5) (iv)   | 6) (v)    |
| 7) (ii)   | 8) (iii)  | 9) (i)    | 10) (v)   | 11) (ii)  | 12) (v)   |
| 13) (v)   | 14) (iv)  | 15) (iii) | 16) (iv)  | 17) (ii)  | 18) (iii) |
| 19) (iii) | 20) (i)   | 21) (iii) | 22) (iii) | 23) (iii) | 24) (ii)  |
| 25) (iii) | 26) (iii) |           |           |           |           |