



Coordinate Plane & Rational

Name: _____

Grade: 6 _____

Date: _____

Plot points in all quadrants, find horizontal/vertical distances, reflect, and reason with rational coordinates.

Part 1 · Plot & Quadrants PLOT

1. Plot (4,-3): quadrant = _____

2. Plot (-2,5): quadrant = _____

3. Plot (-6,-1): quadrant = _____

4. Plot (0,7): axis = _____

5. Plot (3,0): axis = _____

6. Plot (0,0): name = _____

Part 2 · Distance & Reflections DIST

7. Distance (2,5) to (2,-1) = _____

8. Distance (4,3) to (-2,3) = _____

- (9. Reflect $(5, -2)$ over y-axis $\rightarrow$ (_____ , -2)
- (10. Reflect $(-3, 7)$ over x-axis $\rightarrow$ (-3 , _____)
- (11. Reflect $(4, -5)$ over both axes $\rightarrow$ (_____ , _____)
- (12. Midpoint of $(2, 8)$ & $(2, -4)$ = (_____ , _____)

Part 3 · Rational Coordinates RATIONAL

- (13. Plot $(2.5, -3.5)$: quadrant = _____
- (14. Distance $(1.5, 2)$ to $(1.5, 7.5)$ = _____
- (15. Reflect $(-4.2, 3.1)$ over y-axis $\rightarrow$ (_____ , 3.1)
- (16. Midpoint of $(2.5, 5.5)$ & $(2.5, -2.5)$ = (_____ , _____)
- (17. Plot $(0, -6.2)$: axis = _____
- (18. Plot $(-7.3, 0)$: axis = _____

Part 4 · Mixed Contexts CONTEXT

- (19. A drone moves from $(3, 4)$ to $(3, -5)$. Vertical distance = _____

20. A robot moves from $(-2,7)$ to $(5,7)$. Horizontal distance = _____

21. A point $(0,0)$ moves left 6, up 8. New coordinates = (_____ , _____)

22. Reflection: Most helpful strategy? _____

Part 5 · Error Analysis FIX

23. Error: Distance $(2,5)$ to $(2,-1)$ is 4. Correct & mistake: _____ / _____

24. Error: Reflect $(5,-2)$ over y-axis is $(5,2)$. Correct & why: _____ / _____

25. Error: Midpoint of $(2,8)$ & $(2,-4)$ is $(2,4)$. Correct & why: _____ / _____

Part 6 · Challenge CHALLENGE

26. Plot $(-7.5, 3.5)$: quadrant = _____

27. Distance $(2.5,5.5)$ to $(2.5,-2.5)$ = _____

28. Reflect $(-4.2, 3.1)$ over both axes $\rightarrow$ (_____ , _____)

29. Midpoint of $(1.5,2)$ & $(1.5,7.5)$ = (_____ , _____)



30. Reflection: Most helpful strategy? _____

Answer Key

1. QIV
2. QII
3. QIII
4. y-axis
5. x-axis
6. origin
7. 6
8. 6
9. -5
10. -7
11. -4,5
12. 2,2
13. QI
14. 5.5
15. 4.2
16. 2.5,1.5
17. y-axis
18. x-axis
19. 9
20. 7
21. -6,8
22. Varies
23. 6 / subtracted not absolute difference
24. -5,-2 / sign error
25. 2,2 / average not sum
26. QII
27. 8
28. 4.2,-3.1
29. 1.5,4.75
30. Varies

Accept equivalent forms. Reflection varies.