Coordinate Geometry

Slope, midpoint, distance, and parallel or perpendicular reasoning on the plane.

Name _____ Date _____

32 main · 2-up grid · 11 pages · visible side quests

Completion Reward

Shown here as a small pack artifact, not a preview destination.

1. What is the slope of a horizontal line?

A. 0
B. 1
C. undefined
D. -1

1.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

1.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

1.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

1.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

1.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. 2

2.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

2.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

2.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

2.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

2.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

3. What does a midpoint do to a segment?

A. It doubles the segment length.
B. It rotates the segment 90 degrees.
C. It divides the segment into two equal parts.
D. It always makes the segment vertical.

3.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

3.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

3.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

3.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

3.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

4. Which statement is true about parallel lines on the coordinate plane?

A. They always cross at the origin.
B. Their slopes multiply to -1.
C. They must be horizontal.
D. They have equal slopes.

4.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

4.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

4.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

4.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

4.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

5. Which statement is true about perpendicular non-vertical, non-horizontal lines?

A. Their slopes are equal.
B. Their y-intercepts are equal.
C. Their slopes are negative reciprocals.
D. Their distances from the origin are equal.

5.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

5.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

5.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

5.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

5.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

6. A line has slope 2/3. What slope would a parallel line have?

A. -3/2
B. -2/3
C. 3/2
D. 2/3

6.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

6.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

6.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

6.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

6.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

7. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. -3/2
D. 3/2

7.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

7.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

7.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

7.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

7.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

8. What is the slope of the line through (0, 0) and (3, 4)?

A. 3/4
B. 4/3
C. -4/3
D. 7

8.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

8.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

8.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

8.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

8.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

9. What is the midpoint of the segment with endpoints (2, 4) and (6, 8)?

A. (8, 12)
B. (4, 6)
C. (3, 6)
D. (4, 4)

9.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

9.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

9.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

9.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

9.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

10. What should you do first to find the midpoint of a segment on the coordinate plane?

A. Average the x-coordinates and average the y-coordinates.
B. Subtract the x-coordinates and subtract the y-coordinates.
C. Multiply the coordinates together.
D. Switch x and y in both points.

10.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

10.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

10.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

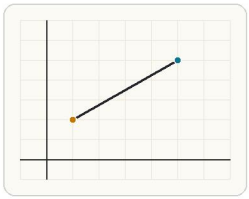
10.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

10.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

11. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What is the mistake?



The midpoint comes from averaging the x-values and averaging the y-values, not from adding the coordinates.

A. They should have multiplied the coordinates.
B. The midpoint should always be an integer.
C. The midpoint formula only works for vertical segments.
D. They added the coordinates instead of averaging them.

11.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

11.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

11.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

11.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

11.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

12. A student finds the slope from (1, 5) to (4, -1) and gets 2. What is the issue?

A. The rise is negative, so the slope should be -2.
B. The run should be negative, so the slope is 2/3.
C. The slope should be undefined.
D. Slope cannot be found from coordinates.

12.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

12.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

12.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

12.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

12.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

13. A student says the midpoint of (2, 1) and (8, 9) is (5, 9). What went wrong?

A. The midpoint should use subtraction only.
B. The midpoint must have x = 2.
C. The student averaged the x-coordinates but forgot to average the y-coordinates.
D. Midpoints do not use coordinates.

13.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

13.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

13.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

13.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

13.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

14. What is the distance between (2, 4) and (7, 4)? Answer with a number.

14.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

14.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

14.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

14.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

14.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

15. What is the distance between (-3, 2) and (5, 2)? Answer with a number.

15.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

15.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

15.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

15.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

15.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

16. What is the distance between (4, 2) and (4, -4)? Answer with a number.

16.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

16.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

16.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

16.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

16.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

17. What is the distance between (1, 2) and (1, 9)? Answer with a number.

17.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

17.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

17.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

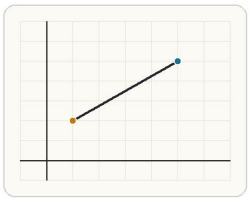
17.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

17.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

18. What is the midpoint of the segment with endpoints (1, 2) and (5, 5)? Answer as an ordered pair.



Average the two x-values and the two y-values to find the point halfway between the endpoints.

18.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

18.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

18.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

18.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

18.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

19. If one line has slope 2/3, which slope belongs to a perpendicular line?

A. 2/3
B. -3/2
C. 3/2
D. -2/3

19.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

19.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

19.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

19.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

19.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

20. If one line has slope -4, which slope belongs to a parallel line?

A. 4
B. 1/4
C. -1/4
D. -4

20.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

20.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

20.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

20.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

20.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

21. Which pair of slopes belongs to perpendicular lines?

A. 3/2 and 3/2
B. 3/2 and 2/3
C. 3/2 and -3/2
D. 3/2 and -2/3

21.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

21.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

21.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

21.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

21.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

22. You need the point halfway between two coordinates. What should you do first?

A. Add the slopes of the segments.
B. Average the x-values and y-values separately.
C. Multiply both coordinates by 2.
D. Find a circle formula.

22.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

22.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

22.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

22.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

22.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

23. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. Perpendicular lines keep the same slope.
B. The slope should be 2.
C. You should add the slopes instead of compare them.
D. Perpendicular slopes must also change sign, so the slope should be -1/2.

23.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

23.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

23.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

23.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

23.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

24. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)? Answer with a number.

24.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

24.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

24.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

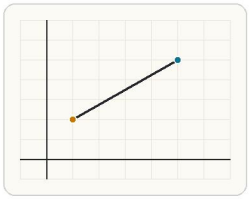
24.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

24.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points

25. What is the slope of the segment from (1, 2) to (5, 5)? Answer with a number.



Use the change in y divided by the change in x between the two coordinates.

25.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

25.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

25.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

25.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

25.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

26. What is the distance between (2, 1) and (6, 4)? Answer with a number.

26.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

26.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

26.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

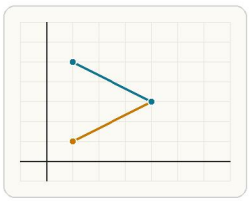
26.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

26.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

27. What is the slope of the segment from (1, 5) to (4, 3)? Answer with a number.



Slope reveals whether a segment rises or falls and allows comparisons for parallel or perpendicular relationships.

27.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

27.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

27.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

27.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

27.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

28. What is the slope of the line through (2, 1) and (6, 5)? Answer with a number.

28.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

28.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

28.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

28.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

28.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

29. What is the slope of the line through (1, 5) and (4, -1)? Answer with a number.

29.1. What is the slope of a horizontal line?

A. undefined
B. 0
C. 1
D. -1

29.2. What is the slope of a vertical line?

A. undefined
B. 0
C. 1
D. -1

29.3. What is the slope of the segment from (1, 2) to (5, 5)?

A. 1/4
B. 3/4
C. 4/3
D. -3/4

29.4. What is the slope from (1, 5) to (4, -1)?

A. -2
B. -1/2
C. 2
D. 1/2

29.5. A student gets slope 2 from (1, 5) to (4, -1). What is the issue?

A. they ignored the negative rise
B. they used the midpoint
C. they swapped x and y labels
D. they should have graphed first

30. Which explanation best checks whether two segments are parallel on the coordinate plane?

A. Find both slopes and compare them.
B. Compare the x-values only.
C. Compare the lengths only.
D. See whether the segments use the same color.

30.1. A line has slope 2/3. What slope would a parallel line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

30.2. A line has slope 2/3. What slope would a perpendicular line have?

A. 2/3
B. -2/3
C. 3/2
D. -3/2

30.3. Which statement is true about parallel lines on the coordinate plane?

A. they have the same slope
B. they always cross once
C. they have opposite intercepts
D. they must be vertical

30.4. Which pair of slopes is perpendicular?

A. 2 and 2
B. 2 and -1/2
C. 3/4 and 3/4
D. -4 and -1/4

30.5. A student says a line perpendicular to slope 2 has slope 1/2. What is missing?

A. the slope should also be negative
B. it should be 2 again
C. it should be 0
D. nothing is missing

31. Student A says the distance between (1, 1) and (4, 5) is 5. Student B says it is 7. Who is correct?

A. Student B
B. Student A
C. Both students
D. Neither student

31.1. What is the distance between (2, 4) and (7, 4)?

A. 3
B. 4
C. 5
D. 9

31.2. What is the distance between (4, 2) and (4, -4)?

A. 2
B. 4
C. 6
D. 8

31.3. What is the distance between (2, 1) and (6, 4)?

A. 4
B. 5
C. 6
D. 7

31.4. To find distance between two points, you usually need:

A. differences in x and y
B. the midpoint only
C. the y-intercept
D. parallel slopes

31.5. One student says the distance from (1, 1) to (4, 5) is 5. Another says 7. Who is correct?

A. the first student
B. the second student
C. both
D. neither

32. What is the midpoint of (-3, 1) and (5, 7)? Answer as an ordered pair.

32.1. What is the midpoint of (2, 4) and (6, 8)?

A. (4, 6)
B. (8, 12)
C. (3, 4)
D. (2, 8)

32.2. To find a midpoint, what should you do first?

A. add the x-values and y-values in pairs
B. multiply the coordinates
C. find the slope
D. subtract one point from the other

32.3. What is the x-coordinate of the midpoint between (-2, 7) and (6, 1)?

A. 2
B. 3
C. 4
D. 5

32.4. What is the midpoint of (-3, 1) and (5, 7)?

A. (1, 4)
B. (2, 4)
C. (1, 3)
D. (4, 1)

32.5. A student says the midpoint of (1, 2) and (5, 5) is (6, 7). What went wrong?

A. they added but forgot to divide by 2
B. they divided first
C. they used the slope formula
D. they reversed the points