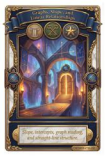
# Graphs, Slope, and Linear Relationships

Slope, intercepts, graph reading, and straight-line structure.

Name _____ Date _____

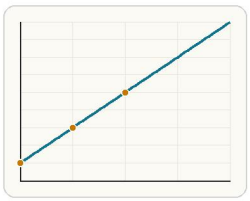
32 main · 2-up grid · 12 pages · visible side quests

**Completion Reward**



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

**1. In a context, what does slope usually represent?**



A straight line changes by the same vertical amount for each step right, so slope represents output change per unit of input.

A. How much the output changes for each unit of input
B. Where the graph crosses the x-axis
C. The largest value of the graph
D. A random point on the line

1.1. What is the slope through (2, 3) and (6, 11)?

A. 1
B. 2
C. 3
D. 4

1.2. What is the slope through (-1, 5) and (3, -3)?

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

1.3. A line goes down 6 while it moves right 3. Its slope is:

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

1.4. If y increases by 9 whenever x increases by 3, the slope is:

A. 1/3
B. 3
C. 6
D. 9

1.5. Which line has slope 0?

A. A vertical line
B. A horizontal line
C. A line through the origin
D. Any line with y in it

**2. What is the y-intercept of y = -3x + 5?**

A. -3
B. 0
C. 8
D. 5

2.1. What is the y-intercept of y = 5x - 2?

A. 5
B. -2
C. 2
D. 0

2.2. What is always true at an x-intercept?

A. x = 0
B. y = 0
C. slope = 0
D. y = 1

2.3. In a cost model y = 12x + 40, the 40 usually means:

A. cost per item
B. starting fee
C. number of items
D. discount amount

2.4. If 2x + y = 9, what is the y-intercept?

A. 2
B. 7
C. 9
D. -9

2.5. For y = -4x + 6, which statement is true?

A. The graph crosses the y-axis at 6
B. The graph crosses the x-axis at 6
C. The slope is 6
D. The line is horizontal

**3. What does the y-intercept of a line represent?**

A. The value of x when y = 0
B. The value of y when x = 0
C. The slope of the line
D. The highest point on the graph

3.1. What is the y-intercept of y = 5x - 2?

A. 5
B. -2
C. 2
D. 0

3.2. What is always true at an x-intercept?

A. x = 0
B. y = 0
C. slope = 0
D. y = 1

3.3. In a cost model y = 12x + 40, the 40 usually means:

A. cost per item
B. starting fee
C. number of items
D. discount amount

3.4. If 2x + y = 9, what is the y-intercept?

A. 2
B. 7
C. 9
D. -9

3.5. For y = -4x + 6, which statement is true?

A. The graph crosses the y-axis at 6
B. The graph crosses the x-axis at 6
C. The slope is 6
D. The line is horizontal

**4. In a study of hours studied and quiz score, which quantity is usually the dependent variable?**

A. Quiz score
B. Hours studied
C. Both are always independent
D. Neither can depend on the other

4.1. A taxi ride costs $8 to start and $3 per mile. Which equation models total cost y after x miles?

A. y = 8x + 3
B. y = 3x + 8
C. y = 11x
D. y = 8 + 3

4.2. In y = 5x + 20 for a phone plan, the slope 5 means:

A. a $20 starting fee
B. $5 per unit of usage
C. the total bill is always $5
D. you use 5 phones

4.3. In y = 7x + 12, the 12 usually represents:

A. the unit rate
B. the starting amount
C. the number of x-values
D. the slope direction

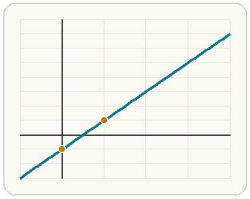
4.4. If x is miles driven and y is total cost, which variable is dependent?

A. x
B. y
C. both equally
D. neither

4.5. A rental costs $30 plus $12 per day. Which model fits?

A. y = 30x + 12
B. y = 12x + 30
C. y = 42x
D. y = 12 + 30

**5. Which equation has slope 2 and y-intercept -1?**



This line crosses the y-axis at -1 and rises 2 units for every 1 unit to the right.

A. y = -x + 2
B. y = x - 2
C. y = -2x - 1
D. y = 2x - 1

5.1. What is the y-intercept of y = 5x - 2?

A. 5
B. -2
C. 2
D. 0

5.2. What is always true at an x-intercept?

A. x = 0
B. y = 0
C. slope = 0
D. y = 1

5.3. In a cost model y = 12x + 40, the 40 usually means:

A. cost per item
B. starting fee
C. number of items
D. discount amount

5.4. If 2x + y = 9, what is the y-intercept?

A. 2
B. 7
C. 9
D. -9

5.5. For y = -4x + 6, which statement is true?

A. The graph crosses the y-axis at 6
B. The graph crosses the x-axis at 6
C. The slope is 6
D. The line is horizontal

**6. A line goes down as x increases, but a student says the slope is positive. What is wrong?**

A. A decreasing line has no slope at all.
B. A decreasing line has a negative slope, not a positive slope.
C. Slope can only be positive on a graph with labels.
D. The slope must be 0 whenever y decreases.

6.1. If a line rises from left to right, its slope is:

A. negative
B. zero
C. positive
D. undefined

6.2. If a line falls from left to right, its slope is:

A. negative
B. zero
C. positive
D. undefined

6.3. A horizontal line has slope:

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

6.4. A vertical line has slope:

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

6.5. A student says a line that goes down as x increases has positive slope. What is wrong?

A. they confused down with up
B. they forgot the intercept
C. they used the wrong variable names
D. they should have found the midpoint

**7. A student says the y-intercept of y = 4x - 6 is 4. What is wrong?**

A. The y-intercept must always be positive.
B. The slope and intercept are always the same number.
C. The equation should be rewritten before you can see an intercept.
D. The y-intercept is the constant term, so it is -6.

7.1. Which equation has slope -4 and y-intercept 3?

A. y = -4x + 3
B. y = 4x - 3
C. y = -3x + 4
D. y = 3x - 4

7.2. A student says the y-intercept of y = 6x - 2 is 6. What is wrong?

A. They used the slope as the intercept
B. They added instead of subtracted
C. They forgot the domain
D. They confused x with y

7.3. Which equation has slope 1/2 and intercept -5?

A. y = 2x - 5
B. y = 1/2 x - 5
C. y = -1/2 x + 5
D. y = 5x + 1/2

7.4. For y = -7x + 4, which statement is true?

A. The slope is 4
B. The y-intercept is -7
C. The slope is -7
D. The line is horizontal

7.5. Which equation has slope 3 and passes through (0, -6)?

A. y = 3x - 6
B. y = -3x - 6
C. y = 3x + 6
D. y = -6x + 3

**8. A student says slope is x/y instead of change in y over change in x. What is wrong?**

Slope compares change in y to change in x between two points, not the raw coordinates of one point.

A. Slope compares vertical change to horizontal change, not x over y.
B. Slope should always be 1.
C. Slope only comes from tables.
D. Nothing is wrong.

8.1. What is the slope through (2, 3) and (6, 11)?

A. 1
B. 2
C. 3
D. 4

8.2. What is the slope through (-1, 5) and (3, -3)?

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

8.3. A line goes down 6 while it moves right 3. Its slope is:

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

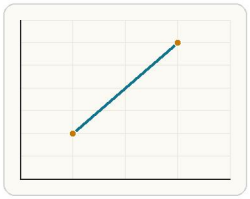
8.4. If y increases by 9 whenever x increases by 3, the slope is:

A. 1/3
B. 3
C. 6
D. 9

8.5. Which line has slope 0?

A. A vertical line
B. A horizontal line
C. A line through the origin
D. Any line with y in it

**9. Find the slope of the line segment shown on the grid. Answer with the slope only.**



Read the vertical change and horizontal change from A to B, then form rise over run.

9.1. What is the slope through (1, 4) and (5, 12)?

A. 1
B. 2
C. 3
D. 4

9.2. Which equation matches the line through (0, -1) and (2, 3)?

A. y = 2x - 1
B. y = -2x - 1
C. y = 4x - 1
D. y = 2x + 1

9.3. A line passes through (3, 5) with slope 2. What expression gives y - 5?

A. 2(x + 3)
B. 2(x - 3)
C. 5(x - 2)
D. x - 3

9.4. A line through (4, 1) is parallel to y = -3x + 6. Which equation fits?

A. y = -3x + 13
B. y = 3x - 11
C. y = -3x - 11
D. y = 3x + 13

9.5. Which point lies on y = 3x - 2?

A. (1, 1)
B. (2, 2)
C. (3, 5)
D. (0, -1)

**10. Which slope would make a line perpendicular to y = (1/2)x + 3?**

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

10.1. A line parallel to y = -3x + 1 has slope:

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

10.2. A line perpendicular to y = -3x + 1 has slope:

A. 3
B. 1/3
C. -1/3
D. 0

10.3. Which pair is perpendicular?

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

10.4. If two different lines have the same slope, they are:

A. parallel or the same line
B. always perpendicular
C. always horizontal
D. not related

10.5. A line perpendicular to a horizontal line is:

A. another horizontal line
B. vertical
C. slope 1
D. slope -1

**11. Which ordered pair lies on the line y = -x + 4?**

A. (1, 2)
B. (3, 1)
C. (2, 4)
D. (0, 5)

11.1. Which ordered pair lies on y = x + 3?

A. (0, 0)
B. (1, 4)
C. (2, 2)
D. (3, 1)

11.2. If a graphed line passes through (0, 2) and rises 1 for every run of 1, which point is on it?

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

11.3. To test whether (a, b) is on a line, you should:

A. substitute a for x and b for y
B. find the midpoint
C. set both coordinates to 0
D. use only the slope

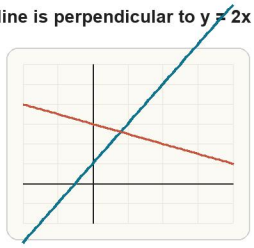
11.4. Why is (2, 5) not on y = x + 1?

A. because 5 is too large
B. because 5 does not equal 2 + 1
C. because x cannot be 2
D. because the slope is wrong

11.5. If point A lies on the graph of y = -x + 4, what must be true?

A. its coordinates satisfy y = -x + 4
B. its x-value equals 4
C. its y-value must be negative
D. its slope is 4

**12. Which line is perpendicular to y = 2x + 1?**



A line perpendicular to slope 2 must have slope -1/2, so the visual comparison is about direction and steepness together.

A. y = 2x - 5
B. y = 0.5x + 3
C. y = -0.5x + 3
D. y = -2x + 3

12.1. A line parallel to y = -3x + 1 has slope:

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

12.2. A line perpendicular to y = -3x + 1 has slope:

A. 3
B. 1/3
C. -1/3
D. 0

12.3. Which pair is perpendicular?

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

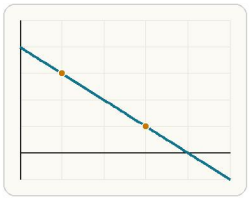
12.4. If two different lines have the same slope, they are:

A. parallel or the same line
B. always perpendicular
C. always horizontal
D. not related

12.5. A line perpendicular to a horizontal line is:

A. another horizontal line
B. vertical
C. slope 1
D. slope -1

**13. How would you describe the graphed line?**



Use the way the line moves across the grid to describe its slope and intercept behavior.

A. Increasing
B. Horizontal
C. Vertical
D. Decreasing

13.1. If a line rises from left to right, its slope is:

A. negative
B. zero
C. positive
D. undefined

13.2. If a line falls from left to right, its slope is:

A. negative
B. zero
C. positive
D. undefined

13.3. A horizontal line has slope:

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

13.4. A vertical line has slope:

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

13.5. A student says a line that goes down as x increases has positive slope. What is wrong?

A. they confused down with up
B. they forgot the intercept
C. they used the wrong variable names
D. they should have found the midpoint

**14. Which equation has slope -3 and y-intercept 2?**

A. y = 3x - 2
B. y = -3x + 2
C. y = -2x + 3
D. y = 2x - 3

14.1. Which equation has slope -4 and y-intercept 3?

A. y = -4x + 3
B. y = 4x - 3
C. y = -3x + 4
D. y = 3x - 4

14.2. A student says the y-intercept of y = 6x - 2 is 6. What is wrong?

A. They used the slope as the intercept
B. They added instead of subtracted
C. They forgot the domain
D. They confused x with y

14.3. Which equation has slope 1/2 and intercept -5?

A. y = 2x - 5
B. y = 1/2 x - 5
C. y = -1/2 x + 5
D. y = 5x + 1/2

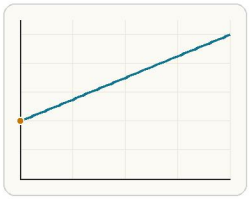
14.4. For y = -7x + 4, which statement is true?

A. The slope is 4
B. The y-intercept is -7
C. The slope is -7
D. The line is horizontal

14.5. Which equation has slope 3 and passes through (0, -6)?

A. y = 3x - 6
B. y = -3x - 6
C. y = 3x + 6
D. y = -6x + 3

**15. In y = 15x + 40 for a car rental, what does 40 represent?**



In a context model, the y-intercept is the amount when x = 0, such as a starting fee before any usage is added.

A. The starting fee before any days are used
B. The cost per day
C. The number of days
D. The slope of the graph in a different unit

15.1. A taxi ride costs $8 to start and $3 per mile. Which equation models total cost y after x miles?

A. y = 8x + 3
B. y = 3x + 8
C. y = 11x
D. y = 8 + 3

15.2. In y = 5x + 20 for a phone plan, the slope 5 means:

A. a $20 starting fee
B. $5 per unit of usage
C. the total bill is always $5
D. you use 5 phones

15.3. In y = 7x + 12, the 12 usually represents:

A. the unit rate
B. the starting amount
C. the number of x-values
D. the slope direction

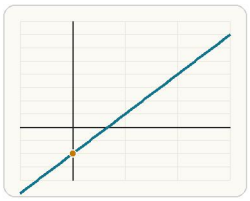
15.4. If x is miles driven and y is total cost, which variable is dependent?

A. x
B. y
C. both equally
D. neither

15.5. A rental costs $30 plus $12 per day. Which model fits?

A. y = 30x + 12
B. y = 12x + 30
C. y = 42x
D. y = 12 + 30

**16. Which line is parallel to y = 3x - 2?**



Parallel lines keep the same rate of change even when they cross the y-axis at different places.

A. y = 3x + 5
B. y = -3x + 1
C. y = x + 3
D. y = -x - 2

16.1. A line parallel to y = -3x + 1 has slope:

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

16.2. A line perpendicular to y = -3x + 1 has slope:

A. 3
B. 1/3
C. -1/3
D. 0

16.3. Which pair is perpendicular?

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

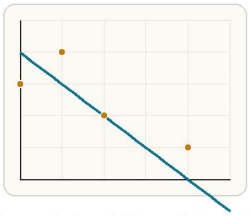
16.4. If two different lines have the same slope, they are:

A. parallel or the same line
B. always perpendicular
C. always horizontal
D. not related

16.5. A line perpendicular to a horizontal line is:

A. another horizontal line
B. vertical
C. slope 1
D. slope -1

**17. Which labeled point lies on the line y = -x + 4?**



A plotted point belongs on the line only if its coordinates match the rule the line represents.

A. A
B. C
C. B
D. D

17.1. Which ordered pair lies on y = x + 3?

A. (0, 0)
B. (1, 4)
C. (2, 2)
D. (3, 1)

17.2. If a graphed line passes through (0, 2) and rises 1 for every run of 1, which point is on it?

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

17.3. To test whether (a, b) is on a line, you should:

A. substitute a for x and b for y
B. find the midpoint
C. set both coordinates to 0
D. use only the slope

17.4. Why is (2, 5) not on y = x + 1?

A. because 5 is too large
B. because 5 does not equal 2 + 1
C. because x cannot be 2
D. because the slope is wrong

17.5. If point A lies on the graph of y = -x + 4, what must be true?

A. its coordinates satisfy y = -x + 4
B. its x-value equals 4
C. its y-value must be negative
D. its slope is 4

**18. To find the slope through (-1, 4) and (3, 10), what should you compute first?**

A. (3 - (-1))/(10 - 4)
B. (10 - 4)/(3 - (-1))
C. 10 + 4
D. 3 + (-1)

18.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

18.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

18.3. Find the slope through (-1, 5) and (3, -3).

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

18.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

18.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first

**19. What is the best next step to rewrite 2x + y = 7 in slope-intercept form?**

A. Divide both sides by 2.
B. Add y to both sides.
C. Subtract 2x from both sides.
D. Swap x and y.

19.1. Rewrite 3x + y = 10 in slope-intercept form.

A. y = 3x + 10
B. y = -3x + 10
C. y = 10x + 3
D. y = -10x + 3

19.2. What is the best first step to rewrite 2x + y = 7?

A. subtract 2x from both sides
B. divide by y
C. set x = 0
D. add y to both sides

19.3. Which is equivalent to x + y = -4?

A. y = x - 4
B. y = -x - 4
C. y = -4x + 1
D. y = 4 - x

19.4. For 4x + y = 9, what is the slope?

A. 4
B. -4
C. 9
D. -9

19.5. For 5x + y = -2, what is the y-intercept?

A. 5
B. -5
C. -2
D. 2

**20. What is the best next step to graph y = -2x + 3?**

A. Plot the x-intercept at (3, 0) first because it is always given
B. Use slope 3 and intercept -2
C. Plot the y-intercept at (0, 3)
D. Start with any point because the equation does not matter

20.1. To graph y = -2x + 5, what should you plot first?

A. the slope triangle
B. the y-intercept
C. the x-intercept
D. any point

20.2. After plotting the y-intercept of y = 3x - 1, what should you use next?

A. the x-intercept
B. the slope
C. the domain
D. the midpoint

20.3. For y = -1/2 x + 4, which move follows the intercept?

A. up 1, right 2
B. down 1, right 2
C. down 2, right 1
D. up 2, right 1

20.4. Which point lies on the y-axis for y = 4x + 2?

A. (2, 0)
B. (0, 2)
C. (4, 2)
D. (2, 4)

20.5. Which equation graphs as a horizontal line?

A. x = 3
B. y = 3
C. y = 3x
D. x = y + 3

**21. What is the x-intercept of y = x - 4?**

A. -4
B. 4
C. 0
D. 8

21.1. What is the y-intercept of y = 5x - 2?

A. 5
B. -2
C. 2
D. 0

21.2. What is always true at an x-intercept?

A. x = 0
B. y = 0
C. slope = 0
D. y = 1

21.3. In a cost model y = 12x + 40, the 40 usually means:

A. cost per item
B. starting fee
C. number of items
D. discount amount

21.4. If 2x + y = 9, what is the y-intercept?

A. 2
B. 7
C. 9
D. -9

21.5. For y = -4x + 6, which statement is true?

A. The graph crosses the y-axis at 6
B. The graph crosses the x-axis at 6
C. The slope is 6
D. The line is horizontal

**22. Find the slope of the line through (2, 5) and (6, 13). Answer with a number.**

22.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

22.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

22.3. Find the slope through (-1, 5) and (3, -3).

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

22.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

22.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first

**23. Which equation represents a line with slope 3 and y-intercept -4?**

A. y = 3x - 4
B. y = -3x - 4
C. y = 3x + 4
D. y = -4x + 3

23.1. Which equation has slope -4 and y-intercept 3?

A. y = -4x + 3
B. y = 4x - 3
C. y = -3x + 4
D. y = 3x - 4

23.2. A student says the y-intercept of y = 6x - 2 is 6. What is wrong?

A. They used the slope as the intercept
B. They added instead of subtracted
C. They forgot the domain
D. They confused x with y

23.3. Which equation has slope 1/2 and intercept -5?

A. y = 2x - 5
B. y = 1/2 x - 5
C. y = -1/2 x + 5
D. y = 5x + 1/2

23.4. For y = -7x + 4, which statement is true?

A. The slope is 4
B. The y-intercept is -7
C. The slope is -7
D. The line is horizontal

23.5. Which equation has slope 3 and passes through (0, -6)?

A. y = 3x - 6
B. y = -3x - 6
C. y = 3x + 6
D. y = -6x + 3

**24. A table shows x-values 0, 2, 4 and y-values 5, 9, 13. Find the slope. Answer with a number.**

24.1. A table shows x-values 0, 2, 4 and y-values 5, 9, 13. What is the slope?

A. 1
B. 2
C. 3
D. 4

24.2. If y increases by 6 whenever x increases by 3, the slope is:

A. 1
B. 2
C. 3
D. 6

24.3. A table increases x by 5 and y by -10 each step. The slope is:

A. -5
B. -2
C. 2
D. 5

24.4. A table is linear when:

A. the x-values repeat
B. the rate of change stays constant
C. the y-values are always positive
D. there are at least four rows

24.5. In a linear table, the slope tells how y changes when x:

A. stays the same
B. changes by one unit
C. becomes zero
D. is negative

**25. Which equation is parallel to y = -3x + 1 and passes through (0, 5)?**

A. y = 3x + 5
B. y = -5x + 3
C. y = -3x - 5
D. y = -3x + 5

25.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

25.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

25.3. Find the slope through (-1, 5) and (3, -3).

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

25.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

25.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first

**26. Rewrite 2x + y = 8 in slope-intercept form. Answer as an equation in slope-intercept form.**

26.1. Rewrite 3x + y = 10 in slope-intercept form.

A. y = 3x + 10
B. y = -3x + 10
C. y = 10x + 3
D. y = -10x + 3

26.2. What is the best first step to rewrite 2x + y = 7?

A. subtract 2x from both sides
B. divide by y
C. set x = 0
D. add y to both sides

26.3. Which is equivalent to x + y = -4?

A. y = x - 4
B. y = -x - 4
C. y = -4x + 1
D. y = 4 - x

26.4. For 4x + y = 9, what is the slope?

A. 4
B. -4
C. 9
D. -9

26.5. For 5x + y = -2, what is the y-intercept?

A. 5
B. -5
C. -2
D. 2

**27. A phone plan costs $20 plus $5 per gigabyte. What does the slope 5 mean in the model y = 5x + 20?**

A. The plan starts at $5
B. The total cost rises $5 for each gigabyte used
C. The intercept is 5 gigabytes
D. The cost drops $5 each gigabyte

27.1. A taxi ride costs $8 to start and $3 per mile. Which equation models total cost y after x miles?

A. y = 8x + 3
B. y = 3x + 8
C. y = 11x
D. y = 8 + 3

27.2. In y = 5x + 20 for a phone plan, the slope 5 means:

A. a $20 starting fee
B. $5 per unit of usage
C. the total bill is always $5
D. you use 5 phones

27.3. In y = 7x + 12, the 12 usually represents:

A. the unit rate
B. the starting amount
C. the number of x-values
D. the slope direction

27.4. If x is miles driven and y is total cost, which variable is dependent?

A. x
B. y
C. both equally
D. neither

27.5. A rental costs $30 plus $12 per day. Which model fits?

A. y = 30x + 12
B. y = 12x + 30
C. y = 42x
D. y = 12 + 30

**28. A taxi ride costs $18 to start and $2 per mile. Which equation models the total cost y after x miles?**

A. y = 18x + 2
B. y = 2x + 18
C. y = 16x
D. y = 20x

28.1. A taxi ride costs $8 to start and $3 per mile. Which equation models total cost y after x miles?

A. y = 8x + 3
B. y = 3x + 8
C. y = 11x
D. y = 8 + 3

28.2. In y = 5x + 20 for a phone plan, the slope 5 means:

A. a $20 starting fee
B. $5 per unit of usage
C. the total bill is always $5
D. you use 5 phones

28.3. In y = 7x + 12, the 12 usually represents:

A. the unit rate
B. the starting amount
C. the number of x-values
D. the slope direction

28.4. If x is miles driven and y is total cost, which variable is dependent?

A. x
B. y
C. both equally
D. neither

28.5. A rental costs $30 plus $12 per day. Which model fits?

A. y = 30x + 12
B. y = 12x + 30
C. y = 42x
D. y = 12 + 30

**29. A car rental charges $40 plus $15 per day. Write the total cost y after x days. Answer in the form y = ...**

29.1. A taxi ride costs $8 to start and $3 per mile. Which equation models total cost y after x miles?

A. y = 8x + 3
B. y = 3x + 8
C. y = 11x
D. y = 8 + 3

29.2. In y = 5x + 20 for a phone plan, the slope 5 means:

A. a $20 starting fee
B. $5 per unit of usage
C. the total bill is always $5
D. you use 5 phones

29.3. In y = 7x + 12, the 12 usually represents:

A. the unit rate
B. the starting amount
C. the number of x-values
D. the slope direction

29.4. If x is miles driven and y is total cost, which variable is dependent?

A. x
B. y
C. both equally
D. neither

29.5. A rental costs $30 plus $12 per day. Which model fits?

A. y = 30x + 12
B. y = 12x + 30
C. y = 42x
D. y = 12 + 30

**30. Which equation matches the line through (0, 2) and (3, 8)?**

A. y = 2x + 2
B. y = 3x + 2
C. y = 2x + 8
D. y = x + 2

30.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

30.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

30.3. Find the slope through (-1, 5) and (3, -3).

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

30.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

30.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first

**31. Which equation represents the line through (2, 1) and (4, 5)?**

A. y = 2x + 3
B. y = 2x - 3
C. y = x - 1
D. y = -2x + 5

31.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

31.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

31.3. Find the slope through (-1, 5) and (3, -3).

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

31.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

31.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first

**32. Which equation is perpendicular to y = (1/2)x - 1 and passes through (1, 2)?**

A. y = -2x + 4
B. y = 2x + 4
C. y = -1/2x + 2
D. y = -2x + 1

32.1. To find the slope through (2, 1) and (6, 9), what should you compute first?

A. change in y and change in x
B. the y-intercept
C. the midpoint
D. the domain

32.2. Find the slope through (2, 1) and (6, 9).

A. 1
B. 2
C. 3
D. 4

32.3. Find the slope through (-1, 5) and (3, -3).

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

32.4. If you reverse the point order when finding slope, what happens?

A. the slope changes sign
B. the slope stays the same
C. the slope becomes 0
D. the intercept changes

32.5. Why is slope written as change in y over change in x?

A. because y is always larger
B. because vertical change is compared to horizontal change
C. because x and y must cancel
D. because the intercept comes first