



Math Worksheet for 8th Grade

Slope

Name: _____

Due Date: _____

Teacher: _____

Parent Sign: _____

1. Intro to slope: Define slope in one sentence for a line on the coordinate plane.
2. Intro to slope: What is the slope of the line that passes through (0, 0) and (4, 2)?
3. Intro to slope: A line rises 3 units as it runs 6 units to the right. What is the slope?
4. Slope & direction: If a line has slope 2, does it rise or fall as you move left to right?
5. Slope & direction: If a line has slope $-\frac{1}{2}$, does it rise or fall as you move left to right?
6. Positive & negative slope: Given points A(1, 5) and B(3, 9), is the slope positive, negative, or zero? Find the slope.
7. Positive & negative slope: Given points C(-2, 4) and D(2, -6), is the slope positive, negative, or zero? Find the slope.
8. Worked example: slope from graph: A graph shows a line passing through (1, 2) and (4, 5). Find the slope.
9. Worked example: slope from graph: A line on a graph goes through (0, -1) and (5, 4). What is the slope?
10. Slope of a line: negative slope: Find the slope of the line through (2, 7) and (5, 1).
11. Slope of a line: negative slope: A line goes through (-3, 8) and (3, -4). Compute the slope.
12. Worked example: slope from two points: Find the slope of the line through (-1, -1) and (2, 5).
13. Worked example: slope from two points: Find the slope of the line through (4, 2) and (4, 9). (Note: think about what kind of line this is.)
14. Slope from equation: What is the slope of the line given by $y = 3x - 4$?
15. Slope from equation: What is the slope of the line given by $2x + y = 7$?
16. Converting to slope-intercept form: Convert $3x + 2y = 12$ to slope-intercept form and state the slope.
17. Converting to slope-intercept form: Convert $5x - 4y = 20$ to slope-intercept form and state the slope.
18. Slope of a horizontal line: What is the slope of the line $y = 6$?
19. Slope of a horizontal line: Identify the slope of the line that passes through (-5, 3) and (8, 3).
20. Intro to slope (word problem): A wheelchair ramp rises 1 foot over a horizontal distance of 12 feet. What is the slope?
21. Slope & direction (word): A roof drops 4 feet for every 8 feet horizontally. State the slope and whether the line rises or falls left to right.
22. Positive & negative slope (word): A hill falls 15 meters over 300 meters horizontally as you move east. What is the slope and its sign?
23. Worked example: slope from graph (fraction): On a graph a line passes through (2, 3) and (5, 7). Find the slope.
24. Worked example: slope from graph (fraction): A line goes through (-4, 2) and (2, -1). Find the slope.
25. Slope of a line: negative slope: Find the slope of the line through (7, -2) and (3, 6).
26. Worked example: slope from two points: Points on a line are (0, 4) and (6, 4). Find the slope and describe the line.
27. Slope from equation: Find the slope of $y = -0.5x + 2$.
28. Converting to slope-intercept form: Convert $4x + 3y = 18$ to $y = mx + b$ and give m.
29. Slope of a horizontal line (word): A train track is perfectly level and at $y = -2$. What is the slope?



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30. Intro to slope (graph description): A line goes up 9 units when you move 3 units to the right. What is its slope?
31. Slope & direction (identify): Which of these slopes correspond to lines that fall left to right: $\frac{1}{3}$, -2, 0, 4?
32. Positive & negative slope (coordinates): Given points E(2, 2) and F(6, -2), is the slope positive, negative, or zero? Compute it.
33. Worked example: slope from graph: A line passes through (-1, 4) and (3, 0). Find the slope.
34. Slope of a line: negative slope: Calculate the slope of the line through (10, 5) and (4, 11).
35. Worked example: slope from two points: Find slope of the line through (-2, -3) and (1, 0).
36. Slope from equation: What is the slope of the line defined by $6x - 2y = 10$?
37. Converting to slope-intercept form: Convert $x - y = 5$ to slope-intercept form and state the slope.
38. Slope of a horizontal line: If two points have the same y-coordinate, what is the slope? Give an example with numbers.
39. Intro to slope (word): A ladder leans against a wall so its top rises 12 feet while the base is 4 feet from the wall. What is the slope of the ladder?
40. Slope & direction (word): A snowplow descends the hill 3 feet for every 6 feet forward. Write the slope and say whether the line rises or falls left to right.
41. Positive & negative slope (fraction): What is the slope of the line through (1, 2) and (4, 1)? Is it positive or negative?
42. Worked example: slope from graph (fraction): Points on a line are (-6, -2) and (0, 4). Find the slope.
43. Slope of a line: negative slope: A line passes through (2, 0) and (-1, 6). Compute its slope.
44. Worked example: slope from two points (decimal): Find the slope of the line through (1.5, 2.0) and (4.5, 5.5).
45. Slope from equation: What is the slope of the line $y + 3 = 2x$?
46. Converting to slope-intercept form: Convert $7x + y = -14$ to slope-intercept form and state the slope.
47. Slope of a horizontal line: The equation $y = b$ represents a horizontal line. If $b = -7$, what is the slope?
48. Intro to slope (interpretation): If slope = rise/run and rise = -8 while run = 4, what is the slope and what does the negative mean?
49. Slope & direction (identify from equation): Without graphing, decide whether the line $2x - 5y = 10$ rises or falls left to right.
50. Mixed word problem: A driveway drops 2.5 meters over a horizontal distance of 25 meters. What is the slope? Is the slope positive or negative if we measure left to right in the direction of the drop?