

Lesson 8

Graphing Linear Equations (Slope-Intercept Form)

Answers

1) slope $m = 4$, y-intercept $b = 1$

2) slope $m = -3$, y-intercept $b = 5$

3) $m = (8 - 2)/(3 - 1) = 6/2 = 3$

4) $m = (1 - 7)/(5 - 2) = -6/3 = -2$

5) $y = -2x + 10$ (subtract $2x$ from both sides)

6) $-2y = -3x + 12$, $y = (3/2)x - 6$

7) $y = -2x + 4$; when $x = 3$: $y = -6 + 4 = -2$

8) slope $m = 1/2$, y-intercept $b = -4$

9) slope $m = -1$, y-intercept $b = 7$

10) $m = (9 - 3)/(4 - (-2)) = 6/6 = 1$

11) $m = (5 - 5)/(6 - 0) = 0/6 = 0 \rightarrow$ horizontal line

12) $-y = -4x + 8$, $y = 4x - 8$

13) $3y = -x + 15$, $y = (-1/3)x + 5$

14) $y = 3x - 5$

15) $y = 2$ (horizontal line)

16) $m = (6 - (-2))/(4 - 0) = 8/4 = 2$; $y = 2x - 2$

17) No; same slope ($m = 2$), different y-intercepts \rightarrow parallel lines, never intersect

18) $m = (-4 - 4)/(1 - (-3)) = -8/4 = -2$

19) $-3y = -5x + 15$, $y = (5/3)x - 5$; when $x = 6$: $y = 10 - 5 = 5$

20) slope = 3 (cost rises \$3 per hour); y-intercept = 8 (base fee of \$8)