

3-3 Study Guide and Intervention

Slopes of Lines

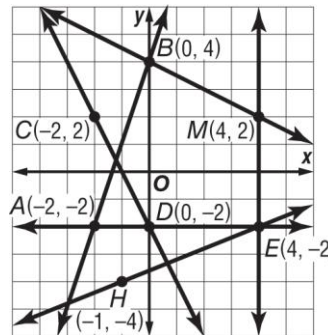
Exercises

Determine the slope of the line that contains the given points.

1. $J(0, 0), K(-2, 8)$
2. $R(-2, -3), S(3, -5)$
3. $L(1, -2), N(-6, 3)$
4. $P(-1, 2), Q(-9, 6)$
5. $T(1, -2), U(6, -2)$
6. $V(-2, 10), W(-4, -3)$

Find the slope of each line.

7. \overline{AB}
8. \overline{CD}
9. \overline{EM}
10. \overline{AE}
11. \overline{EH}
12. \overline{BM}



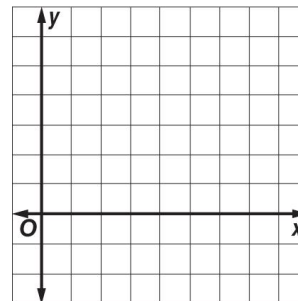
Exercises

Determine whether \overline{MN} and \overline{RS} are *parallel*, *perpendicular*, or *neither*. Graph each line to verify your answer.

13. $M(0, 3), N(2, 4), R(2, 1), S(8, 4)$
14. $M(-1, 3), N(0, 5), R(2, 1), S(6, -1)$
15. $M(-1, 3), N(4, 4), R(3, 1), S(-2, 2)$
16. $M(0, -3), N(-2, -7), R(2, 1), S(0, -3)$

Graph the line that satisfies each condition.

17. slope = 4, passes through (6, 2)
18. passes through $H(8, 5)$, perpendicular to \overline{AG} with $A(-5, 6)$ and $G(-1, -2)$
19. passes through $C(-2, 5)$, parallel to \overline{LB} with $L(2, 1)$ and $B(7, 4)$



3-4 Study Guide and Intervention

Equations of Lines

Exercises

Write an equation in slope-intercept form of the line having the given slope and y-intercept or given points. Then graph the line.

1. $m: 2, b: -3$

2. $m: -\frac{1}{2}, b: 4$

3. $m: \frac{1}{4}, b: 5$

4. $m: 0, b: -2$

Write an equation in point-slope form of the line having the given slope that contains the given point. Then graph the line.

5. $m = \frac{1}{2}, (3, -1)$

6. $m = -2, (4, -2)$

7. $m = -1, (-1, 3)$

8. $m = \frac{1}{4}, (-3, -2)$

Exercises

For Exercises 9-12, use the following information.

Jerri's current satellite television service charges a flat rate of \$34.95 per month for the basic channels and an additional \$10 per month for each premium channel. A competing satellite television service charges a flat rate of \$39.99 per month for the basic channels and an additional \$8 per month for each premium channel.

9. Write an equation in slope-intercept form that models the total monthly cost for each satellite service, where p is the number of premium channels.
10. If Jerri wants to include three premium channels in her package, which service would be less, her current service or the competing service?
11. A third satellite company charges a flat rate of \$69 for all channels, including the premium channels. If Jerri wants to add a fourth premium channel, which service would be least expensive?
12. Write a description of how the fee for the number of premium channels is reflected in the equation.