Tell whether the slope of the line is positive, negative, zero or undefined. Then find the slope if it exists.
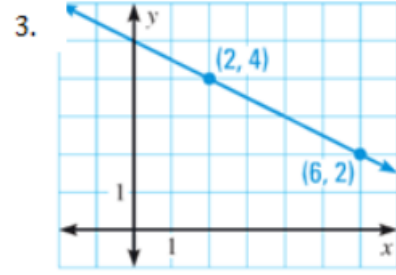
1.

(1, 1)
(−2, −1)

positive

2.

(−3, 2)
(−3, −2)

undefined

3.

(2, 4)
(6, 2)
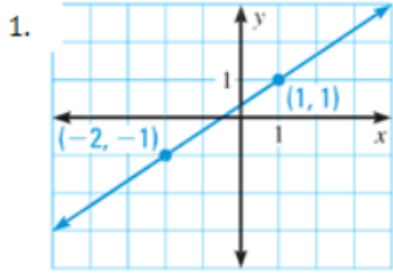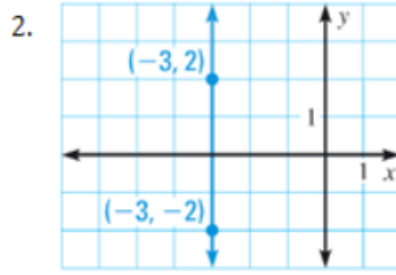
negative

4. **ERROR ANALYSIS** *Describe* and correct the error in calculating the slope of the line shown.

(6, 3)
(x, y)
(12, 0)
(x, y)

$$m = \frac{12 - 6}{0 - 3} = \frac{6}{-3} = -2 \quad \bcancel{}$$
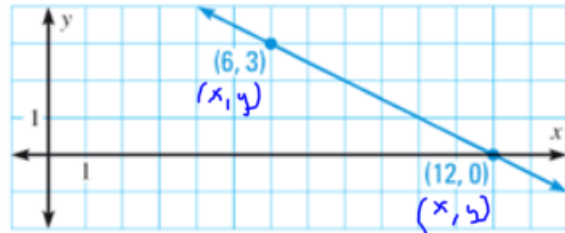
They put *x* minus *x* over *y* minus *y* instead of *y* minus *y* over *x* minus *x*.

$(6, 3)(12, 0)$

$$\frac{0 - 3}{12 - 6} = \frac{-3}{6} = \frac{-1}{2}$$

Find the slope of the line that passes through the points.

5. (-2, -1) and (4, 5)	6. (1, 3) and (3, -2)	7. (1, -3) and (7, 3)
$\frac{5 - ^-1}{4 - ^-2} = \frac{6}{6} = 1$	$\frac{-2 - 3}{3 - 1} = \frac{-5}{2}$	$\frac{3 - ^-3}{7 - 1} = \frac{6}{6} = 1$

8. (-9, 1) and (1, 1)

$$\frac{1 - 1}{1 - ^-9} = \frac{0}{10} = 0$$

9. ★ **MULTIPLE CHOICE** The slope of the line that passes through the points $(-2, -3)$ and $(8, -3)$ is __?__.   C

(A) positive   (B) negative   (C) zero   (D) undefined

$$\frac{-3 - ^-3}{8 - ^-2} = \frac{-3 + 3}{8 + 2} = \frac{0}{10} = 0$$

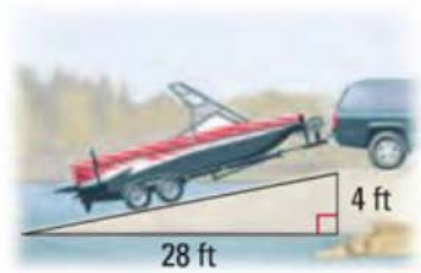**Find the slope of the object.**

10. Skateboard ramp

rise
15 in.
54 in.
run

$$\frac{15}{54}$$

11. Pet ramp

24 in.
60 in.

$$\frac{24}{60} = \frac{2}{5}$$

12. Boat ramp

4 ft
28 ft

$$\frac{4}{28} = \frac{1}{7}$$

Find the slope (rate of change) for the following.

13. Mr. Brust has 50 algebra books. He handouts 2 books every 3 days. Slope (rate of change) = $\frac{2}{3}$ (LABEL IT!) *2 books / 3 days*	14. Bob makes 40 dollars a week. He already has 200 dollars. Slope (rate of change) = (LABEL IT!) $\frac{40}{1}$ *40 / 1 week*	15. $y = 7 + \frac{3}{2}x$ Slope (rate of change) = $\frac{3}{2}$
16. $y = -3x + 5$ Slope (rate of change) = -3	17. 	x	y
---	---
0	2
1	11
2	20 | +1 +9 Slope (rate of change) = $\frac{9}{1} = 9$	18. 	x	y
---	---
0	0
2	1
4	2	 +2 +1 Slope (rate of change) = $\frac{1}{2}$
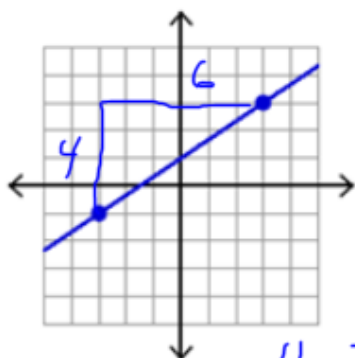
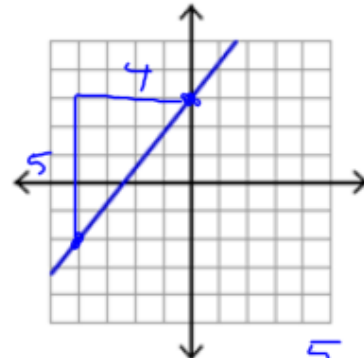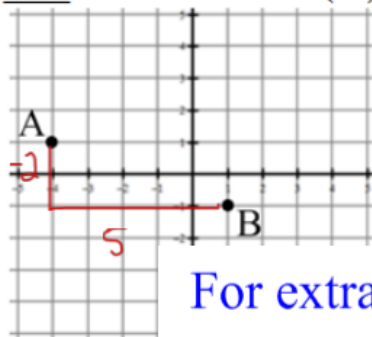|		
19. 6 4 Slope (rate of change) = $\frac{4}{6} = \frac{2}{3}$	20. -1 4 Slope (rate of change) = $\frac{-1}{4}$	21. 4 5 Slope (rate of change) = $\frac{5}{4}$
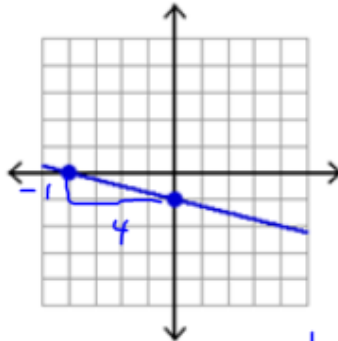
SKILLZ REVIEW

GRAPH

1. Describe how to move from point A to point B.

   -2 units in the y direction (rise)

   5 units in the x direction (run)

A
-2
5
B

2. Describe how to move from point C(0,3) to point D(2, −3).

SIMPLIFY

3. $6(3x + 2) - 10$

   $18x + 12 - 10$

   $\boxed{18x + 2}$

4. $5x - 3(4x + 1)$

SOLVE

5. $8 - x = 12$

   $-8 \quad -8$

   $\frac{-x}{-1} = \frac{4}{-1}$

   $\boxed{x = 4}$

6. $5x - 4 = 8x + 3$

For extra help, check the Skillz Review video!