English Spanish

# B Appendix Review

Check It Out Vocabulary Help BigIdeasMath.com

## Review Key Vocabulary

slope, *p. A32*
rise, *p. A32*
run, *p. A32*
linear function, *p. A38*
*y*-intercept, *p. A38*
slope-intercept form, *p. A38*

## Review Examples and Exercises

### B.1 Solving Multi-Step Equations *(pp. A10–A15)*

**a. Solve $-5x + 9x + 30 = 14$. Check your solution.**

$-5x + 9x + 30 = 14$ Write the equation.

$4x + 30 = 14$ Combine like terms.

$-30 \quad -30$ Subtract 30 from each side.

$4x = -16$ Simplify.

$\frac{4x}{4} = \frac{-16}{4}$ Divide each side by 4.

$x = -4$ Simplify.

∴ The solution is $x = -4$.

**Check**

$-5x + 9x + 30 = 14$

$-5(-4) + 9(-4) + 30 \stackrel{?}{=} 14$

$20 - 36 + 30 \stackrel{?}{=} 14$

$14 = 14$ ✓

**b. Solve $2(n + 5) - 3 = 9$. Check your solution.**

$2(n + 5) - 3 = 9$ Write the equation.

$2(n) + 2(5) - 3 = 9$ Use Distributive Property.

$2n + 10 - 3 = 9$ Multiply.

$2n + 7 = 9$ Subtract.

$-7 \quad -7$ Subtract 7 from each side.

$2n = 2$ Simplify.

$\frac{2n}{2} = \frac{2}{2}$ Divide each side by 2.

$n = 1$ Simplify.

∴ The solution is $n = 1$.

**Check**

$2(n + 5) - 3 = 9$

$2(1 + 5) - 3 \stackrel{?}{=} 9$

$2(1) + 2(5) - 3 \stackrel{?}{=} 9$

$2 + 10 - 3 \stackrel{?}{=} 9$

$9 = 9$ ✓

### Exercises

**Solve the equation. Check your solution.**

1. $-4x + 6x - 15 = -25$
2. $11k - 8k - 3 = 9$
3. $3(2n - 7) - 3 = 36$
4. $7 - 1.5(4 - 10d) = 31$

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## B.2 Solving Equations with Variables on Both Sides *(pp. A16–A21)*

**Solve $z - 42 = -6z$. Check your solution.**

$z - 42 = -6z$ Write the equation.

$-z \quad -z$ Subtract $z$ from each side.

$-42 = -7z$ Simplify.

$\frac{-42}{-7} = \frac{-7z}{-7}$ Divide each side by $-7$.

$6 = z$ Simplify.

∴ The solution is $z = 6$.

**Check**

$z - 42 = -6z$

$6 - 42 \stackrel{?}{=} -6(6)$

$-36 = -36$ ✓

### Exercises

**Solve the equation. Check your solution.**

**5.** $3x = x - 18$

**6.** $-5n + 4 = 24 - n$

**7.** $8s = 3(s + 5)$

**8.** $-2(1 - 2a) = 4\left(\frac{5}{4}a - 2\right)$

**9.** $5w + 6 = -4 - 5w$

**10.** $-6(m + 2) = m - 2$

## B.3 Solving Equations Using Tables and Graphs *(pp. A22–A27)*

**Use a table to solve $7x = 6x + 1$. Check your solution.**

Find the $x$-value that makes $7x$ equal to $6x + 1$.

Try different values of $x$.

| $x$ | $7x$ | $6x + 1$ |
|---|---|---|
| $-1$ | $7(-1) = -7$ | $6(-1) + 1 = -5$ |
| $0$ | $7(0) = 0$ | $6(0) + 1 = 1$ |
| $1$ | $7(1) = 7$ | $6(1) + 1 = 7$ |

Each side of the equation equals 7 when $x = 1$.

**Check**

$7x = 6x + 1$

$-6x \quad -6x$

$x = 1$ ✓

∴ The solution is $x = 1$.

## Exercises

**Use a table to solve the equation. Check your solution.**

**11.** $6x - 4 = 8x$

**12.** $x + 7 = 3x + 1$

**13.** $-13 - 2b = b - 7$

**14.** $4 + 4m = m + 13$

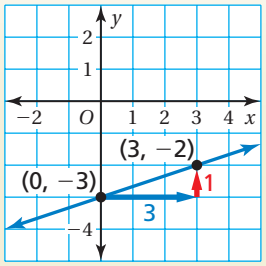
## B.4 Slope of a Line *(pp. A30–A35)*

**Find the slope of the line.**

$$\text{slope} = \frac{\text{rise}}{\text{run}}$$ Write formula for slope.

$$= \frac{1}{3}$$ Substitute.

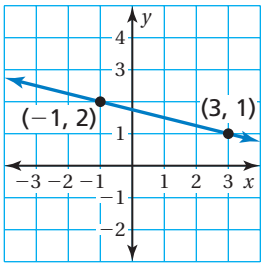
∴ The slope is $\frac{1}{3}$.



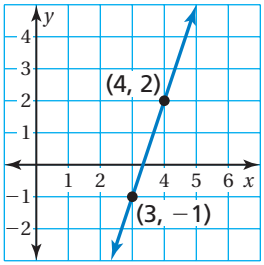

## Exercises

**Find the slope of the line.**

**15.**




**16.**




## B.5 Linear Functions *(pp. A36–A41)*

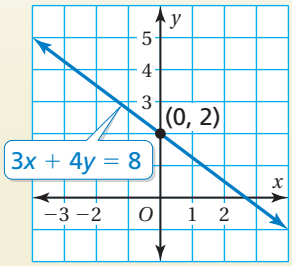
**Find the slope and *y*-intercept of the graph of the function $3x + 4y = 8$.**

$3x + 4y = 8$ Write the equation.

$4y = -3x + 8$ Subtract $3x$ from each side.

$y = -\frac{3}{4}x + 2$ Divide each side by 4.

∴ The slope is $-\frac{3}{4}$ and the *y*-intercept is 2.




## Exercises

**17.** Find the slope and *y*-intercept of the graph of the function $5x + 5y = 10$.

**18.** Graph the linear function $y = 4x - 1$ using slope-intercept form.