Get Ready for the Chapter

Diagnose Readiness | You have two options for checking prerequisite skills.

1 **Textbook Option** Take the Quick Check below. Refer to the Quick Review for help.

QuickCheck	QuickReview

Evaluate each expression for the given values.

1. $3x + y$ if $x = -4$ and $y = 2$

2. $-2m + 3k$ if $m = -8$ and $k = 3$

3. CARS The expression $\frac{m \text{ mi}}{g \text{ gal}}$ represents the gas mileage of a car. Find the gas mileage of a car that goes 295 miles on 12 gallons of gasoline. Round to the nearest tenth.

Evaluate $-3x^2 + 4x - 6$ if $x = -2$.

$-3x^2 + 4x - 6$	Original expression
$= -3(-2)^2 + 4(-2) - 6$	Replace x with -2.
$= -3(4) + 4(-2) - 6$	Evaluate the power.
$= -12 + (-8) - 6$	Multiply.
$= -26$	Add and subtract.

Solve each equation.

4. $x - 4 = 9$ **5.** $x + 8 = -3$

6. $4x = -16$ **7.** $\frac{x}{3} = 7$

8. $2x + 1 = 9$ **9.** $4x - 5 = 15$

10. $9x + 2 = 3x - 10$

11. $3(x - 2) = -2(x + 13)$

12. FINANCIAL LITERACY Claudia opened a savings account with $325. She saves $100 per month. Write an equation to determine how much money d, she has after m months.

Solve $-2(x - 4) = 7x - 19$.

$-2(x - 4) = 7x - 19$	Original equation
$-2x + 8 = 7x - 19$	Distributive Property
$-2x + 8 + 2x = 7x - 19 + 2x$	Add $2x$ to each side.
$8 = 9x - 19$	Simplify.
$8 + 19 = 9x - 19 + 19$	Add 19 to each side.
$27 = 9x$	Simplify.
$3 = x$	Divide each side by 3.

Solve each equation.

13. $|x + 11| = 18$ **14.** $|3x - 2| = 16$

15. SURVEYS In a survey, 32% of the people chose pizza as their favorite food. The results were reported to within 2% accuracy. What is the maximum and minimum percent of people who chose pizza?

Solve $|x - 4| = 9$.

If $|x - 4| = 9$, then $x - 4 = 9$ or $x - 4 = -9$.

$x - 4 = 9$	or	$x - 4 = -9$
$x - 4 + 4 = 9 + 4$		$x - 4 + 4 = -9 + 4$
$x = 13$		$x = -5$

So, the solution set is $\{-5, 13\}$.

2 **Online Option** Take an online self-check Chapter Readiness Quiz at <u>connectED.mcgraw-hill.com</u>.