

Algebra 1
Chapter 1 Review #1

Name _____

Solve the equation.

1. $\frac{3}{4}x = -12$	2. $10 - m = 14$	3. $3g + 5 = -10$
4. $\frac{x-2}{3} = -6$	5. $8x - 3 - 2x = 21$	6. $\frac{x}{7} - 10 = -8$

Write and solve an equation to answer the question.

7. A mechanic charges \$40 per hour for labor and \$250 for parts. The total bill is \$410. How many hours did the mechanic work?
8. At a restaurant, you and four of your friends divide the bill evenly. Each person pays \$7.50. How much is the total bill?

Solve the equation.

9. $7h - 12 = 3h + 24$	10. $\frac{1}{3}(6t + 12) = -3(2t - 4)$	11. $x + 3(x + 1) = 4x + 5$
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12. Gym A charges a \$50 membership fee and \$20 per month. Gym B charges a \$10 membership fee and \$30 per month. After how many months is the total cost the same at both gyms?

Solve the equation. Check for extraneous solutions.

13. $|x - 2| + 8 = 16$

14. $4|7x - 10| = -8$

15. Your friend says the absolute value equation $|2x - 16| + 7 = 3$ has two solutions because the constant on the right is positive. Is your friend correct? Explain.

Solve the literal equation.

16. $4x + 2y = 12 ; y$

17. $ux + rx = w ; x$

18. $V = lwh ; w$