

Name: _____
Algebra 1

Date: _____
Band: _____

Unit 2: Solving Equations

LT#1: Solve one-step equations in one variable.

LT#2: Solve two-step equations in one variable.

1. What is the solution of the equation $9x + 12 = 39$?
2. What is the solution of $-6x + 15 = -3$?
3. Solve: $6n - 7 = 35$
4. If $7x + 3 = 24$, what is the value of $5 - 4x$?
5. Jordana is taking her family to the fair. She plans to take \$5 for each admission ticket plus \$35 for food. Write an equation that models the amount of money Jordana takes to the fair.

LT#3: Solve multi-step equations in one variable.

6. Find three consecutive integers whose sum is 66.
7. Fanta scored 5 points more than $\frac{4}{5}$ of Uyen's test score. Which equation represents the relationship between Fanta's test score, F , and Uyen's test score, U ?
8. The sum of two consecutive integers is 153. Write an equation that can be used to find the first integer n .
9. Admission to the movie is \$7.50 for adults and \$3.50 for students. The theater's goal is to receive \$1500 in revenue for the evening. Write an equation that models this relationship.
10. Solve $-4(5 - 2x) = 8$

LT#4: Solve equations with variables on both sides.

LT#5: Identify equations that are identities or have no solution.

11. What is the solution of $4x - 6 = -6x - 4$?
12. Solve: $-2(3x + 2) = 2x + 6$
13. Solve: $3(5x - 6) = -63$

LT#6: Solve and apply proportions.

14. What is the solution of $\frac{3}{5} = \frac{x}{15}$?

15. Solve: $\frac{3}{4} = \frac{8}{x-1}$

16. Solve: $\frac{x-1}{2} = \frac{x+3}{-1}$

17. What is the solution of $\frac{3}{2.5} = \frac{d}{75}$?

LT#12: Solve percent problems using proportions.

LT#13: Solve percent problems using the percent equation.

18. What percent of 86 is 50 to the nearest whole percent?

19. The Girl Scouts hoped to raise \$1000 selling cookies. Instead, they raised \$1050. What percent of their goal did they achieve?

LT#14: Find percent change.

20. A store's cost for a stereo was \$27. The markup was 75%. A customer purchased it on sale at 40% off the marked up price. What was the purchase price of the stereo?

21. Find the percent decrease for each situation.

- A. \$250 is discounted to \$212.50
- B. \$40 is discounted to \$32'

22. The price of the car was marked as \$14,000. The end of the month sale has lowered the price to \$12,500. What is the percent decrease to the nearest percent?

23. A company's sales of garden tractors increased about 106% from 2007 to 2008. The number of tractors sold in 2007 was 347. How many tractors were sold in 2008?