

Unit 3: Equations and Inequalities

ADVANCED • SET 2

Name: _____ Date: _____

Solve each equation or inequality. Show your work and give an exact answer (integer, fraction, or inequality like $x < -6$).

1. Solve for x : $12(x - 3/4) = -30$

Answer: _____

2. Solve for x : $(2/3)x - 5 = 11$

Answer: _____

3. Solve for x : $-15x + 240 = -510$

Answer: _____

4. Solve for x : $-6(x + 2.5) = 39$

Answer: _____

5. Solve the inequality for x : $-8x + 17 > 65$

Answer: _____

6. Solve the inequality for x : $5(x - 7) < -45$

Answer: _____

7. Solve the inequality for x : $(-3/4)x - 2 > 7$

Answer: _____

8. A data plan charges a flat \$35 fee plus \$0.20 per GB used. One month's bill was \$57. Solve $0.20g + 35 = 57$ to find g , the number of GB used.

Answer: _____

9. A shop adds a \$6 markup to each shirt (all the same base price). A customer buys 5 shirts for a total of \$145. Solve $5(x + 6) = 145$ to find x , the base price in dollars.

Answer: _____

10. A club starts with \$500 and spends \$85 on supplies. It then buys \$15 gift cards, one at a time. Solving $15n + 85 < 500$, what is the greatest whole number of gift cards n it can buy?

Answer: _____

11. Solve for x : $(-2/5)x + 3/10 = -9/10$

Answer: _____

12. Solve for x : $24(x + 1/8) = -18$

Answer: _____