Palomar College Math Placement Test Study Guide Intermediate Algebra

Topic 3: First Degree Equations and Inequalities

1.	Solve:	$\frac{-2}{5}x = 14$
2.	Solve:	8t - 3 = 45
3.	Solve:	2x - 3 = 4x - 5
4.	Solve:	-5(2x+1) = 1 - 4(x+9)
5.	Solve:	15 - y - (2y + 3) = 0
6.	If $\frac{3}{4} + \left(\frac{-1}{2}\right)$	$= x - 1\frac{3}{4}$, then x = ?
7.	Solve:	$\frac{3}{4}x - 6 = x + 5$
8.	Solve:	$\frac{3}{4}x + \frac{5}{8} - \frac{1}{2}x = \frac{3}{2}x - \frac{5}{2}$
9.	Solve:	x + 3 = 5
10.	Solve:	4x + 3 - 2 = 7
11.	Solve:	6x + 5 = 1
12.	Solve and g	raph your solution on the number line: $-3x < 18$
13.	Solve and g	raph your solution on the number line: $-2(y-3) \ge 5y + 13$
14.	Solve and w	write your solution using set builder notation: $ \mathbf{x} > 3$

15. Solve and write your solution using interval notation: $|x + 5| \le 2$

- 16. If a number is multiplied by 5 and then 4 is subtracted, the result is 16. What is the number?
- 17. Translate the following into an equation: The difference between a number, *x*, and 4 more than twice the number is 7.

Answers:

x = -35 1. 2. t = 6 x = 1 3. 4. x = 5 5. y = 46. $\mathbf{x} = 2$ x = -44 7. 8. x = 5/2x = 2 or x = -89. 10. x = 3/2 or x = -311. No solution 12. x > -6 0 13. y ≤ **-**1 $\{ x \mid x < -3 \text{ or } x > 3 \}$ 14. 15. $-7 \le x \le -3$ 16. n = 4x - (2x + 4) = 717.

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