

UNIT 1 EQUATIONS AND INEQUALITIES REVIEW GUIDE

Complete this review guide and review all past notes and homework assignments in preparation for your assessment.

Part 1: The Real Number System

Check off all set categories to which the number belongs to.

		Irrational	Rational	Integer	Whole Number	Natural Number
1.	4					
2.	8.46					
3.	-9					
4.	0					
5.	9.1243 ...					
6.	$\sqrt{2}$					
7.	$\frac{7}{8}$					

Part 2: Evaluating Expressions

Evaluate each expression for the given values.

8. Evaluate $(a + y)^2 + 2y$ if $a = 5$, $y = -3$.

9. Evaluate $z^2x + z^2w$ if $x = 4$, $w = 5$, $z = -2$.

10. Use the formula $F = \frac{9}{5}C + 32$ to find the value of F if $C = 15$.

Part 3: Solving Equations

Solve each equation. Show all your work. Simplify each of your answers. Leave as improper fractions.

11. $12x - 51 = 3(x + 7)$	12. $-5(m - 5) = 3(10 - 2m) + m$
13. $4(2x - 9) = 3x + 4$	14. $\frac{1}{2}y = 8$



Part 4: Solving Absolute Value Equations

Solve each absolute value equation. Show all your work.

15. $ 3x - 4 = -6$	16. $ x - 5 = 4$
17. $4 x + 3 = 20$	18. $6 + 3 x - 7 = 12$

Part 5: Solving and Graphing Inequalities

Solve each inequality. Graph the solution on the number line.

19. $-8w + 4 \geq 12$ 	20. $3x - 2(x - 4) > 7$ 
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