

A2 Unit 1 Test Review

Name _____

Show all work on a separate sheet of paper.

To prepare for the Unit 1 test, you will need to know how to...

- ✓ Classify number sets
- ✓ Identify properties
- ✓ Simplify and evaluate expressions
- ✓ Solve linear and literal equations
- ✓ Solve and graph linear inequalities in one variable
- ✓ Solve and graph compound inequalities
- ✓ Solve and graph absolute value equations and inequalities

Below you will find examples of the types of problems that you may see on your test. Use this study guide along with your notes, homework, and class work to help you prepare. Good luck!

Use order of operations to simplify each expression. (Non-Calculator)

1. $24 - 9 \cdot 2 + 6 \div 3$

2. $\frac{5(16-5)-1}{4^2-7}$

Solve each equation:

3. $4(a+5) - 2(a+6) = 3$

4. $g - 1 = 2(g - 2)$

Solve each inequality. Write your answer in interval notation. Then graph the solution set.

5. $4y + 2 < 8y - (6y - 10)$

6. $2x + 5 < 3x - 7$

Solve each compound inequality. Write your answer in interval notation. Then graph the solution set.

7. $-c + 1 \geq c$ or $3c - 1 > c + 13$

8. $14 < 3h + 2 < 2$

Solve each literal equation for the indicated variable.

9. $p: s = x(p+1)$

10. $y: 5x - 3y = 2$

Solve each absolute value equation. Don't forget that you should write a compound statement so that you get two solutions. ☺

11. $|4x - 5| = 25$

12. $3|x + 6| = 36$

13. $2|3y| - 8 = 10$

Solve each absolute value inequality. Don't forget... Great**OR** and Less Than**And**. ©

14. $2|x+4| \geq 18$

15. $|5+k| \leq 8$

16. $|x-5|-7 < 8$

17. State the property illustrated in each statement.

a. $(8 \cdot 5) \cdot 10 = 8 \cdot (5 \cdot 10)$

b. $3 \cdot 5 - 3 \cdot 2 = 3(5 - 2)$

c. $7 + (5 + 3) = 7 + (3 + 5)$

d. $7 + (-7) = 0$

e. $18 + 0 = 18$

f. $(-5) \cdot 1 = -5$

g. $9 \cdot \frac{1}{9} = 1$

h. $43 + 25 = 25 + 43$

18. Given the numbers $\frac{2}{2}, \pi, -1.4, \sqrt{3}, 0, -15 \dots$

a. Which numbers are whole numbers? _____

b. Which numbers are real numbers? _____

c. Which numbers are rational numbers? _____

d. Which numbers are integers? _____