Algebra 2 (S)
1.3/1.4/1.5 review

NAME Key

Limestone Community High School

Section 1-3
Solving Equations

1. Solve the equation.

$-13x + 56 = -22$
$-56 \quad -56$

$\frac{-13x}{-13} = \frac{-78}{-13}$

$x = 6$

2. Solve the equation.

$\frac{4x}{3} + 18 = 42$
$-18 \quad -18$

$3 \cdot \frac{4x}{3} = 24 \cdot 3$

$\frac{4x}{4} = \frac{72}{4}$

$x = 18$

Section 1-3
Solving Equations

3. Solve the equation.

$14x + 35 - 8x = 23$

$6x + 35 = 23$
$-35 \quad -35$

$6x = -12$

$x = -2$

4. Solve the equation.

$6x - 4(3x + 8) = 16$

$6x - 12x - 32 = 16$

$-6x - 32 = 16$
$+32 \quad +32$

$-6x = 48$

$x = -8$

1

Section 1-3
Re-writing Equations & Formulas

5. Re-write the equation by solving for ***r***.

$d = rt$

$\frac{d}{t} = \frac{rt}{t}$

$r = \frac{d}{t}$

6. Re-write the equation by solving for ***l***.

$P = 2l + 2w$

$-2w \quad -2w$

$P - 2w = 2l$

$\frac{P-2w}{2} = \frac{2l}{2}$

$l = \frac{P-2w}{2}$

Section 1-3
Re-writing Equations & Formulas

7. Re-write the equation by solving for ***x***.

$y = 4x - 3$

$+3 \quad +3$

$y + 3 = 4x$

$\frac{y+3}{4} = \frac{4x}{4}$

$x = \frac{y+3}{4}$

8. Re-write the equation by solving for ***C***.

$F = \frac{9}{5}C + 32$

$-32 \quad -32$

$5 \cdot (F - 32) = \frac{9}{5}C$ Cross mult.

$\frac{5(F-32)}{9} = \frac{9C}{9}$ divide

$C = \frac{5(F-32)}{9}$

Section 1-4
Solving Absolute Value Equations

9. Evaluate the expression if

$$x = 5, y = -6, z = -2$$

$$|-2x + 4y|$$

$|-2(5) + 4(-6)|$

$|-10 - 24|$

$|-34|$

34

Section 1-4
Solving Absolute Value Equations

11. Solve for y. Check your solutions.

$$|y + 6| = 9$$

2 equations

$y + 6 = 9$ | $y + 6 = -9$

$-6 \quad -6$ | $-6 \quad -6$

$y = 3$ | **$y = -15$**

10. Solve for x. Check your solutions.

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

2 equations

$3x + 6 = 12$ | $3x + 6 = -12$

$-6 \quad -6$ | $-6 \quad -6$

$\frac{3x}{3} = \frac{6}{3}$ | $\frac{3x}{3} = \frac{-18}{3}$

$x = 2$ | **$x = -6$**

12. Solve for z. Check your solutions.

$$|z - 11| + 22 = 9$$

$-22 \quad -22$

$|z - 11| = -13$

No Solution

Section 1-5
Solving Inequalities

13. Solve the inequality.

$5x - 14 > 31$

$+14 \quad +14$

$\frac{5x}{5} > \frac{45}{5}$

$x > 9$

14. Solve the inequality.

$-29 \geq 7y + 13$

$-13 \quad -13$

$\frac{-42}{7} \geq \frac{7y}{7}$

$-6 \geq y$

put the variable on the Left

$y \leq -6$

Section 1-5
Solving Inequalities

15. Solve the inequality.

$-3x \leq 54$

$\frac{-3x}{-3} \quad \frac{54}{-3}$

divide by a negative flip the sign

$x \geq -18$

16. Solve the inequality.

$3(3z - 7) < 13z + 51$

$9z - 21 < 13z + 51$

$-13z \quad -13z$

$-4z - 21 < 51$

$+21 \quad +21$

$\frac{-4z}{-4} < \frac{72}{-4}$

$z > -18$

4