

Name: \_\_\_\_\_

Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Solving Absolute Value Equations – One Step **Answers**

### Section I. Solve for the variable if possible

1.  $|x| = 8$

$x = 8$     $x = -8$

2.  $|y| = -3$

*not possible (an absolute value cannot equal a negative)*

3.  $|j + 3| = 11$

$x = 8$     $x = -14$

4.  $|m - 6| = 4$

$x = 10$     $x = 2$

5.  $|3k| = 15$

$x = 5$     $x = -5$

6.  $|-4h| = 16$

$x = 4$     $x = -4$

7.  $|g + 9| = -2$

*not possible (an absolute value cannot equal a negative)*

8.  $|7 + a| = 13$

$x = 6$     $x = -20$

9.  $|b - 14| = 5$

$x = 19$     $x = 9$

10.  $|-f| = 10$

$x = 10$     $x = -10$

11.  $\frac{|x|}{8} = 9$

$x = 72$     $x = -72$

12.  $\left|\frac{p}{-7}\right| = 6$

$x = -42$     $x = 42$

13.  $3|j| = 12$

$x = 4 \quad x = -4$

14.  $|q| - 5 = 16$

$x = 21 \quad x = -21$

15.  $-9|g| = 36$

*not possible (an absolute value cannot equal a negative)*

16.  $\frac{|y|}{7} = -9$

*not possible (an absolute value cannot equal a negative)*

17.  $|m| + 13 = 25$

$x = 17 \quad x = -17$

18.  $|a| - 9 = -4$

$x = 5 \quad x = -5$

19.  $|d + 7| = 1$

$x = -6 \quad x = -9$

20.  $\frac{|p|}{8} = 5$

$x = 40 \quad x = -40$

21.  $-6|x| = -30$

$x = 5 \quad x = -5$

22.  $-5|x| = 45$

*not possible (an absolute value cannot equal a negative)*

23.  $|k| - 23 = -16$

$x = 7 \quad x = -7$

24.  $|x| + 18 = 29$

$x = 11 \quad x = -11$