Date Completed: _____
Mentor Initials: _____

Absolute Value

Multiple Choice

1. $|13 - 9| - |9 - 13| = ?$
A) -16
B) -8
C) -4
D) 0

2. How many solutions does the equation $|x - 5| = 14$ have?
A) Zero
B) Exactly one
C) Exactly two
D) More than two

3. $|3(-5) + 3| = ?$
A) -12
B) 7
C) 12
D) 18

4. If $x < y$, then $|x - y|$ is equivalent to which of the following?
A) $x + y$
B) $-(x + y)$
C) $x - y$
D) $-(x - y)$

5. How many solutions does the equation $|x - 10| = 0$ have?
A) Zero
B) Exactly one
C) Exactly two
D) More than two

6. For real numbers c and d, when is the equation $|c + d| = |c - d|$ true?

A) Always
B) Only when $c = d$
C) Only when $c = 0$ or $d = 0$
D) Never

7. $$-10|v - 5| = -60$$

If x and y are the solutions to the equation above, what is the value of $x + y$?

A) -5
B) -1
C) 5
D) 10

8. How many solutions does the equation $|x + 3| = -4$ have?

A) Zero
B) Exactly one
C) Exactly two
D) More than two

9. $$|x - 5| + 2 = 5$$

What is the sum of the solutions to the given equation?

A) 2
B) 5
C) 8
D) 10

10. $$3|x - 2| - 4 = 5$$

What is the positive solution to the given equation?

A) 2
B) 3
C) 5
D) 9

Grid-In

11. $|x - 8| = 9$

What is the sum of the solutions to the given equation?

12. $2|x - 9| = 8$

If x is the positive solution of the equation above, what is the value of $x - 9$?

13. $3|1 - x| + 4|1 - x| = 14$

What is the positive solution to the given equation?

14. $|x - 10| = 4$

If c and d are the solutions to the equation above, what is the value of $|c - d|$?

15. What is the solution to the given equation $3x + |x - 2| = 14$?