Name_____

ABSOLUTE VALUE EQUATIONS #2

Directions: Solve each of the *absolute value* equations below. Test each possible solution by replacing the variable with each possible value. For your answer choose the values that make the equation true. Circle the correct answer.

Examples: $|x+7|=10$ $|x-2|=22$

x = 3 and x = -17 x = 24 and x = -20

because $|3+7|=10$ and $|-17+7|=10$ because $|24-2|=22$ and $|-20-2|=22$

1) $|x+9|=14$

a) x = 2 and x = 8
b) x = 5 and x = -23
c) x = -3 and x = 10

2) $|x-8|=10$

a) x = 11 and x = -10
b) x = 0 and x = 6
c) x = 18 and x = -2

3) $|x+3|=17$

a) x = 14 and x = -20
b) x = 6 and x = 3
c) x = -4 and x = 2

4) $|x+1|=13$

a) x = 8 and x = -7
b) x = 8 and x = -11
c) x = 12 and x = -14

5) $|2x+4|=14$

a) x = 5 and x = -9
b) x = 1 and x = -9
c) x = -3 and x = 10

6) $|x-6|=10$

a) x = 0 and x = 12
b) x = 1 and x = 6
c) x = 16 and x =-4

7) $|2x+3|=17$

a) x = 1 and x = -6
b) x = -10 and x = 7
c) x = -8 and x = 5

8) $|x+1|=5$

a) x = 4 and x = -6
b) x = 4 and x = 0
c) x = 4 and x = -1

9) $|x-9|=6$

a) x = -19 and x = 1
b) x = 2 and x = -15
c) x = 3 and x = 15

10) $|x-8|=2$

a) x = 10 and x = 6
b) x = 2 and x = 14
c) x = -14 and x = 2

11) $|x-3|=9$

a) x = -10 and x = -12
b) x = 12 and x = -6
c) x = -12 and x = 6

12) $|x-1|=5$

a) x = -4 and x = 6
b) x = -4 and x = -11
c) x = -4 and x = -10

13) $|4x+4|=24$

a) x = 5 and x = -7
b) x = 4 and x = -6
c) x = -3 and x = 1

14) $|10x-10|=80$

a) x = 1 and x = -10
b) x = -7 and x = 9
c) x = 4 and x = 2

15) $|8x+4|=44$

a) x = 3 and x = -4
b) x = 6 and x = 3
c) x = -6 and x = 5

16) $|x+1|=94$

a) x = -84 and x = 93
b) x = -9 and x = 93
c) x = -95 and x = 93