

NAME: \_\_\_\_\_

*P.I. A.N.6: Evaluate expressions involving absolute value(s)*

Simplify:

1.  $|-2|$

[A]  $\frac{1}{2}$       [B] 2      [C] -2      [D]  $-\frac{1}{2}$

2.  $-8 - |-7 - 8| - 6$

[A] -29      [B] 3      [C] 1      [D] -1

Evaluate:

3.  $|-2.3|$

4.  $|-12 - (-2)|$

Simplify:

5.  $+|-5 + 6| - 7 - 4$

6.  $13 - 14 - |-13| + |15 - 14 + 4|$

7.  $1 - 12 - |-11| - [-|-13|]$

8.  $-[-(-3)] - \{-[-(-1)]\}$

9. Evaluate the expression for  $a = -6$  and  $b = -2$ .

$|a| + |4b|$

[A] -14      [B] 2      [C] 14      [D] -2

10. Evaluate the expression  $|x| + |y| - |z|$  when  $x = 3$ ,  $y = -2$ , and  $z = -5$ .

11. Compare the quantities in Column A and Column B.

Column A

Column B

$|a|$

$|-a|$

[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

[C] The quantities are equal.

[D] The relationship cannot be determined from the information given.

12. Use the problem solving strategy *Guess and Test* to find two values each for  $a$  and  $b$ , where  $a$  is positive and  $b$  is negative, to make the statement  $|a - b| = |b - a|$  true.

13. Use the problem solving strategy of *Guess and Test* to find two values each for  $a$  and  $b$  to make the statement  $-|ab| = ab$  true.

[1] B

[2] A

[3] 2.3

[4] 10

[5] -10

[6] -9

[7] -9

[8] -2

[9] C

[10] 0

[11] C

Answers may vary. Sample:  $a = 2$  and  
[12]  $b = -2$ ,  $a = 3$  and  $b = -3$ .

Answers may vary. Sample:  $a = -2$ ,  $b = 2$   
[13] and  $a = -5$ ,  $b = 3$