

NAME: _____

P.I. A.N.6: Evaluate expressions involving exponential expressions

1. Evaluate $2y^2(x + y)$ when $x = 1$ and $y = 5$. [A] 105 [B] 300 [C] 450 [D] 55
2. Evaluate: $\frac{y}{2x} \cdot z^2$ when $x = 6$, $y = 168$, and $z = 12$.
[A] 336 [B] 24,192 [C] 1008 [D] 2016
3. Given $x = 4$ and $y = 2$, evaluate the expression x^2y^2 . [A] 12 [B] 64 [C] 32 [D] 16
4. Compare the quantities in Column A and Column B.

<u>Column A</u>	<u>Column B</u>
c^{59} if $c = -50$	c^{58} if $c = -50$

[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.
5. Find the value of $2x^2 + x - 2$ when $x = -2$.
6. Find the value of $x^3 + 3x^2 - 2$ when $x = 3$.

Evaluate:

7. $(5s + 2t)^2$ when $s = 2$ and $t = 5$.
8. $(5e + 5f)^2$ when $e = 5$ and $f = -2$.
9. Evaluate the expression $\frac{a^2 + b^2 - c^2}{2ab}$ when $a = 4$, $b = 3$, and $c = 5$.
10. Use the problem solving strategy *Guess and Test* to find two values of n that make the equation $4n = n^3$ true.

- [1] B
- [2] D
- [3] B
- [4] B
- [5] 4
- [6] 52
- [7] 400
- [8] 225
- [9] 0
- [10] True for $n = -2, 0, 2$