

Unit 1: Expressions
PRE-TEST

For each of the following expressions, identify the:

- a) Terms
- b) Coefficients
- c) Variables
- d) Exponents
- e) Constants

IF you cannot identify any of these, write NONE.

1. $-3x^3 + 5x^2 - 8x + 15$	2. $9a^2 + 3 - 7a^5 - a + a^4$
a)	a)
b)	b)
c)	c)
d)	d)
e)	e)

Simply each of the following expressions using the order of operations and showing all of your steps along the way:

3. $(10 \div 5 - (5 - 4)) \times 2$

4. $(9 \times 2) \div (6 + 1 - 1) \times 2^3$

Evaluate each using the values given:

5. $3h(h - j)$; use $h = 3$ and $j = 1$

6. $2(c - (b \div 6 - a \div 4) + 2)$; use $a = 4$, $b = 6$, and $c = 5$

Simplify using the distributive property and combining like terms when possible:

7. $6x + 4x - 3 + 8 - 9x + 4$

8. $-3(x - 5) + 2(-2x + 7)$

Translate into an algebraic expression using numbers, variables, and operation signs:

9. Five more than the sum of a number and seven

10. The difference of ten and a three times a number

11. The quotient of a number x and fifteen.

12. The product of negative twelve and a number

13. Eight less than a number cubed

14. The sum of twenty-eight and a number squared

Write a verbal expression for each algebraic expression:

15. $14 + 3x$

16. $12x - 7y$

17. $-2(t^2 - 5)$

18. $\frac{x}{13}$

19. $5s$

20. $6(y + 2) - 3$