Algebra I
11.3 Worksheet #4
Polynomial Multiplication Using the Distributive Property.

Name: _____
Date: _____ Hour: ____

Multiply by using the Distributive Property.

1. $6(x - 3x^2)$ _____
2. $4r(r^2 + 2r + 3)$ _____
3. $6(x + 2)$ _____
4. $6x(x + 2)$ _____
5. $b^2(b + 3)$ _____
6. $3y(y^2 - 1)$ _____
7. $3y^2(y^2 + 1)$ _____
8. $3(m^2 + 8)$ _____
9. $f^2(3f^4 - 6f + 5)$ _____
10. $t^3(4t^2 - 7t + 3)$ _____
11. $a(3a^2 - 4a + 7)$ _____
12. $-(-2b - 5)$ _____
13. $2b^2(5b + 6)$ _____
14. $3(9x - 4)$ _____
15. $2x(2x + 1)$ _____
16. $-5(7x^2 - 2x)$ _____
17. $x(x + 4)$ _____

For the product $(3x + 5)(2x + 7)$, match each of the products in the left column with its correct description in the right column.

1. $3x \cdot 7$
2. $3x \cdot 2x$
3. $5 \cdot 7$
4. $5 \cdot 2x$

a. Product of first terms
b. Product of outer terms
c. Product of inner terms
d. Product of last terms

The "FOIL" name is a method to multiply two binomials. It stands for:

F _____ O _____ I _____ L _____

Multiply by using the FOIL method.

1. $(3y + 4)(4y + 5)$

F ____ · ____ = ____
O ____ · ____ = ____
I ____ · ____ = ____
L ____ · ____ = ____
= _____

2. $(4b - 7)(2b + 1)$

F ____ · ____ = ____
O ____ · ____ = ____
I ____ · ____ = ____
L ____ · ____ = ____
= _____

3. $(2a + 1)(3a - 1)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

4. $(3p - 2)(p + 1)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

5. $(y - 2)(y + 2)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

6. $(2x + 3)(3x + 7)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

7. $(m - 7)(m + 7)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

8. $(3k - 2)(3k + 2)$

F ____ · ____ = ____

O ____ · ____ = ____

I ____ · ____ = ____

L ____ · ____ = ____

= _____

9. $(3r - 5)(2r - 3)$

$\frac{\quad}{F} + \frac{\quad}{O} + \frac{\quad}{I} + \frac{\quad}{L} =$

_____

10. $(2m + 5)(3m + 1)$

$\frac{\quad}{F} + \frac{\quad}{O} + \frac{\quad}{I} + \frac{\quad}{L} =$

_____