Principles of Algebra Name/Date Clee / Today

ALL PROBLEMS CAN BE COMPLETED ON THIS WORKSHEET

WS 11B.2 – More Multiplying Polynomials

#1-16, Simplify.

1. $(x-5)(x-6)$

F O I L
$= x^2 - 6x - 5x + 30$

$= \boxed{x^2 - 11x + 30}$

2. $(m+4)(m-2)$

F O I L
$= m^2 - 2m + 4m - 8$

$= \boxed{m^2 + 2m - 8}$

3. $(p+6)(4p-3)$

F O I L
$= 4p^2 - 3p + 24p - 18$

$= \boxed{4p^2 + 21p - 18}$

4. $(3n-2)(5+6n)$

F O I L
$= 15n + 18n^2 - 10 - 12n$

$= \boxed{18n^2 + 3n - 10}$

5. $(4j+7)(j+2)$

F O I L
$= 4j^2 + 8j + 7j + 14$

$= \boxed{4j^2 + 15j + 14}$

6. $(2y-5)(7y-3)$

F O I L
$= 14y^2 - 6y - 35y + 15$

$= \boxed{14y^2 - 41y + 15}$

7. $(5b+d)(b-2d)$

F O I L
$= 5b^2 - 10bd + bd - 2d^2$

$= \boxed{5b^2 - 9bd - 2d^2}$

8. $(p-q)(2p+3q)$

F O I L
$= 2p^2 + 3pq - 2pq - 3q^2$

$= \boxed{2p^2 + pq - 3q^2}$

9. $(4a+5z)(2z-4a)$

F O I L
$= 8az - 16a^2 + 10z^2 - 20az$

$= \boxed{-16a^2 - 12az + 10z^2}$

10. $(2y+7)^2 = (2y+7)(2y+7)$

F O I L
$= 4y^2 + 14y + 14y + 49$

$= \boxed{4y^2 + 28y + 49}$

11. $(3p-4q)^2 = (3p-4q)(3p-4q)$

F O I L
$= 9p^2 - 12pq - 12pq + 16q^2$

$= \boxed{9p^2 - 24pq + 16q^2}$

12. $(5x^3 - 3y^2)^2 = (5x^3 - 3y^2)(5x^3 - 3y^2)$

F O I L
$= 25x^6 - 15x^3y^2 - 15x^3y^2 + 9y^4$

$= \boxed{25x^6 - 30x^3y^2 + 9y^4}$

13. $(4b+3)(16b^2 - 12b + 9)$

$= 64b^3 - 48b^2 + 36b + 48b^2 - 36b + 27$

$= \boxed{64b^3 + 27}$

14. $(2g^2 - g^3 + g)(g-1)$

$= 2g^3 - 2g^2 - g^4 + g^3 + g^2 - g$

$= \boxed{-g^4 + 3g^3 - g^2 - g}$

15. $(2v^2 + v)(3v^2 - 2v - 3)$

$= 6v^4 - 4v^3 - 6v^2 + 3v^3 - 2v^2 - 3v$

$= \boxed{6v^4 - v^3 - 8v^2 - 3v}$

16. $(a+b+c)(a-b-c)$

$= a^2 - ab - ac + ab - b^2 - bc + ac - bc - c^2$

$= \boxed{a^2 - b^2 - c^2 - 2bc}$