## Multiplying Binomials by Binomials Worksheet

For each of the following, find the product:

1. $(x + 1)^2$

$= \boxed{x^2 + 2x + 1}$

2. $(x + 1)(x + 2)$

$= \boxed{x^2 + 3x + 2}$

3. $(x + 4)(x + 3)$

$= \boxed{x^2 + 7x + 12}$

4. $(x + 12)(x + 5)$

$= \boxed{x^2 + 17x + 60}$

5. $(x - 4)(x - 3)$

$= \boxed{x^2 - 7x + 12}$

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

$= \boxed{x^2 - 6x + 5}$

7. $(x - 9)(x - 6)$

$= \boxed{x^2 - 15x + 54}$

8. $(x - 2)^2$

$= \boxed{x^2 - 4x + 4}$

9. $(x - 6)(x + 3)$

$= \boxed{x^2 - 3x - 18}$

10. $(x - 2)(x + 8)$

$= \boxed{x^2 + 6x - 16}$

11. $(x - 3)(x + 3)$

$= \boxed{x^2 - 9}$

12. $(x + 5)(x - 4)$

$= \boxed{x^2 + x - 20}$

13. $(2x + 1)(x + 5)$

$= \boxed{2x^2 + 11x + 5}$

14. $(3x + 1)(x + 2)$

$= \boxed{3x^2 + 7x + 2}$

15. $(x - 1)(2x - 1)$

$= \boxed{2x^2 - 3x + 1}$

16. $(x + 7)(2x - 4)$

$= \boxed{2x^2 + 10x - 28}$

17. $(5x - 7)(x + 3)$

$= \boxed{5x^2 + 8x - 21}$

18. $(x - 5)(4x + 2)$

$= \boxed{4x^2 - 18x - 10}$

19. $(3x - 2)^2$

$= \boxed{9x^2 - 12x + 4}$

20. $(5x + 2)(3x + 4)$

$= \boxed{15x^2 + 26x + 8}$

21. $(5x - 7)(2x - 3)$

$= \boxed{10x^2 - 29x + 21}$

22. $(5x - 2)(5x + 2)$

$= \boxed{25x^2 - 4}$

23. $(3x + 3)(4x - 5)$

$= \boxed{12x^2 - 3x - 15}$

24. $(-3x - 1)(5x - 1)$

$= \boxed{-15x^2 - 2x + 1}$

25. $(-2x + 1)(4x + 1)$

$= \boxed{-8x^2 + 2x + 1}$

26. $(-2x - 5)(-3x - 2)$

$= \boxed{6x^2 + 19x + 10}$

27. $(x + \frac{1}{2})(x - \frac{3}{2})$

$= \boxed{x^2 - x - \frac{3}{4}}$

28. $(x - \frac{2}{5})(x - \frac{3}{4})$

$= \boxed{x^2 - \frac{23}{20}x + \frac{3}{10}}$

29. $(2x + \frac{1}{4})(x + \frac{3}{4})$

$= \boxed{2x^2 + \frac{7}{4}x + \frac{3}{16}}$

30. $(x + \frac{1}{6})(3x - \frac{5}{8})$

$= \boxed{3x^2 - \frac{1}{8}x - \frac{5}{48}}$

31. $2(x - 2)(x + 5)$

$= 2(x^2 + 3x - 10)$

$= \boxed{2x^2 + 6x - 20}$

32. $-2(x + 4)(x + 6)$

$= -2(x^2 + 10x + 24)$

$= \boxed{-2x^2 - 20x - 48}$