

## Operations with Polynomials

### Operations with Polynomials: Multiplying & Dividing – Completion

Simplify each of the following by performing the specified operation:

1. $-a(-3a - 3)$	2. $(5a + 1)(a - 2)(a + 2)$
3. $3x(x^2 + 6x + 6)$	4. $(x - 1)(2x + 9)(-3x - 1)$
5. $(-3q - 7)(7q + 2)$	6. $(w - 2)(2w^2 + 23w + 11)$
7. $(4w - 5)(2w + 1)$	8. $(c^2 - 4)(-2c^2 + c - 3)$
9. $(3b + 4)(b + 8)$	10. $(5d^2 - 8d + 3)(3d^2 - 10d - 6)$

11. $(10x^2 + 15x + 20) \div (5x + 5)$	12. $(18a^2 + 6a + 9) \div (3a - 2)$
13. $(12b^2 + 23b + 15) \div (3b + 8)$	14. $(27y^2 + 27y - 30) \div (9y - 6)$
15. $(b^3 - 4b^2 + b - 2) \div (b + 1)$	16. $(z^4 - 3z^3 + 2z^2 - 4z + 4) \div (z - 1)$
17. $(x^5 - 4x^3 + 4x^2) \div (x - 4)$	18. $(y^3 + 11y^2 - 10y + 6) \div (y + 2)$
19. $(g^4 - 3g^2 - 18) \div (g - 2)$	20. $(6x^5 + 5x^4 + x^3 - 3x^2 + x) \div (3x + 1)$