

4-1 Operations with Polynomials

CCSS REGULARITY Simplify.

32. $(x - y)(x^2 + 2xy + y^2)$

ANSWER:

$$x^3 + x^2y - xy^2 - y^3$$

33. $(a + b)(a^3 - 3ab - b^2)$

ANSWER:

$$a^4 + a^3b - 3a^2b - 4ab^2 - b^3$$

34. $4(a^2 + 5a - 6) - 3(2a^3 + 4a - 5)$

ANSWER:

$$-6a^3 + 4a^2 + 8a - 9$$

35. $5c(2c^2 - 3c + 4) + 2c(7c - 8)$

ANSWER:

$$10c^3 - c^2 + 4c$$

36. $5xy(2x - y) + 6y^2(x^2 + 6)$

ANSWER:

$$10x^2y - 5xy^2 + 6x^2y^2 + 36y^2$$

37. $3ab(4a - 5b) + 4b^2(2a^2 + 1)$

ANSWER:

$$12a^2b + 8a^2b^2 - 15ab^2 + 4b^2$$

38. $(x - y)(x + y)(2x + y)$

ANSWER:

$$2x^3 + x^2y - 2xy^2 - y^3$$

39. $(a + b)(2a + 3b)(2x - y)$

ANSWER:

$$4a^2x - 2a^2y + 10abx - 5aby + 6b^2x - 3b^2y$$

Simplify.

57. $(n^2 - 7)(2n^3 + 4)$

ANSWER:

$$2n^5 - 14n^3 + 4n^2 - 28$$