

Name : _____

Simplifying Polynomial Expressions

MS3

Simplify each expression.

1) $16 + 5(7a^7 + 3a^8) - 6a(5a^8 - 2a^7) - 6$

2) $(5n^3 + 4n^2)(7n^2 - 9n^3)$

3) $(z - 2)(12z^2 - 9z^2) - 3z^3 - 5z^2 - 2(z^3 + 6)$

5) $2(5m^2 - 13m^4 - 4m^3) + 2(8s + 7) + 4(19s - 7)$

7) $\frac{2}{3}(6x^2 + 6x^3 - 9x^4) + 2x^7 - 6x^7 + 6x^5$

9) $18b^7 + 2(4b^6 - 3b^6) - 6b(3b^6 + 8) + 48b - 8$

10) $12q(5q^3 + 6q - 2q^4) - (11q^5 - 4q^4)$

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Answer key

MS3

Simplifying Polynomial Expressions

Simplify each expression.

1) $16 + 5(7a^7 + 3a^8) - 6a(5a^8 - 2a^7) - 6$

2) $(5n^3 + 4n^2)(7n^2 - 9n^3)$

$10 + 35a^7 + 27a^8 - 30a^9$

$28n^4 - n^5 - 45n^6$

3) $(z - 2)(12z^2 - 9z^2)$

4) $4x^3 - 5x^2 - 2(x^3 + 6)$

$11z^4 - 19z^3 - 6z^2$

$2x^3 - 12$

5) $2(5m^2 - 13m^4) - 4$

6) $2(8s + 7) + 4(19s - 7)$

$-26m^4$

7) $\frac{2}{3}(6x^2 + 6x^3 - 9x^4)$

8) $4x^7 + 2x^7 - 6x^7 + 6x^5$

$-3x^4 + 10x^3 - 11x^2$

$-2x^7 - 2x^7 + 7x^5$

9) $18b^7 + 2(4b^6 - 3b^6) - 6b(3b^6 + 8) + 48b - 8$

10) $12q(5q^3 + 6q - 2q^4) - (11q^5 - 4q^4)$

$2b^6 - 8$

$-35q^5 + 64q^4 + 72q^2$

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