

Name : _____

Simplifying Polynomial Expressions

MS1

Simplify each expression.

1) $3(4x - 5) - 2(3x + 7) + 4(2x - 8)$

2) $\frac{3}{2}(2a^2 + 6a^3 - 9a^5 + 8a^2 - 3a^5 + 2a^3)$

3) $(2m^3 + 4m^2)(2m^2 + 5m^3)$

4) $10c^7 + 7(c^6 - 5s^9) - s(4s^6 + 8)$

5) $10p(2p^5 - 4p^9 +$

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$- 2x^2) - \frac{12}{5}(5x^3 + 10)$

7) $3(15d^2 - 10d^2 +$

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$2r^2 + 5r^3)$

9) $\frac{1}{2}(-8x^7 + 2x^9 - 6x^7 + 4x^9 - 10)$

10) $5(a^6 + 2a^5) - 6a(5a^4 - 7a^3)$

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Answer key

Simplifying Polynomial Expressions

MS1

Simplify each expression.

1) $3(4x - 5) - 2(3x + 7) + 4(2x - 8)$

$14x - 61$

2) $\frac{3}{2}(2a^2 + 6a^3 - 9a^5 + 8a^2 - 3a^5 + 2a^3)$

$-18a^5 + 12a^3 + 15a^2$

3) $(2m^3 + 4m^2)(2m^2 + 5m^3)$

$8m^4 + 24m^5 + 1$

4) $10c^7 + 7(c^6 - 5s^9) - s(4s^6 + 8)$

$+ 2s^6 - 8s$

5) $10p(2p^5 - 4p^9 +$

$-40p^{10} + 10p^8 +$

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$- 2x^2) - \frac{12}{5}(5x^3 + 10)$

7) $3(15d^2 - 10d^2 +$

$29d^3 - 8d^2$

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$2r^2 + 5r^3)$

9) $\frac{1}{2}(-8x^7 + 2x^9 - 6x^7 + 4x^9 - 10)$

$3x^9 - 7x^7 - 5$

10) $5(a^6 + 2a^5) - 6a(5a^4 - 7a^3)$

$5a^6 - 20a^5 + 42a^4$