

Name : _____

Simplify: Multi-variable Expressions

MS1

Simplify each expression.

1) $(5a^2 + 7b + 3) - (3a^2 - 4b + 7)$

2) $\frac{3}{5}(3x^4 - 4y^2 - 2x^4 + 4x^4 - y^2)$

3) $5(q^2 + 2qr - s^2) - (2q^2 + 3r^2 - 4s^2)$

5) $(4ab^4 - 7 - 3ac^2) + (2m^2n + n - 2) - 3$

7) $\frac{1}{2}(6xyz - 2xy + 4z) + (6u + 4v - 7)$

9) $p + 7 - (2q - 3p - 2q + 3r) - 12$

10) $\frac{3}{2}((4a^3 - 2b^2 + 1) - (2c - 1 - 2b^2))$

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Name : _____

Answer key

MS1

Simplify: Multi-variable Expressions

Simplify each expression.

1) $(5a^2 + 7b + 3) - (3a^2 - 4b + 7)$

$2a^2 + 11b - 4$

2) $\frac{3}{5}(3x^4 - 4y^2 - 2x^4 + 4x^4 - y^2)$

$3x^4 - 3y^2$

3) $5(q^2 + 2qr - s^2) - (2q^2 + 3qr - 2s^2)$

$4q^2 + 9qr - 6s^2$

5) $(4ab^4 - 7 - 3ac^2) - (2ab^4 - 7 - 3ac^2)$

$-2ab^4 - 8ac - 14$

7) $\frac{1}{2}(6xyz - 2xy + 4z) - (3xyz - xy + 2z)$

$6xyz + 9xy + 4z$

$-2u + v + 8$

9) $p + 7 - (2q - 3p - 2q + 3r) - 12$

$4p - 3r - 5$

10) $\frac{3}{2}((4a^3 - 2b^2 + 1) - (2c - 1 - 2b^2))$

$6a^3 - 3c + 3$

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