

Algebra 1 8.2

Multiply a polynomial by a monomial

Solve equations involving the product of a monomial and a polynomial

monomial

polynomial

distributive property

like terms

Whiteboards

5 in a row (if time)

Distributive property
Show your process

Example 1 Multiply a Polynomial by a Monomial

Find $-3x^2(7x^2 - x + 4)$.

Guided Practice

Find each product.

1A. $5a^2(-4a^2 + 2a - 7)$

1B. $-6d^3(3d^4 - 2d^3 - d + 9)$

5 in a row (product)
(5-10 min.)

Example 2 Simplify Expressions

Simplify $2p(-4p^2 + 5p) - 5(2p^2 + 20)$.

Distributive property
Combine like terms

Simplify each expression.

2A. $3(5x^2 + 2x - 4) - x(7x^2 + 2x - 3)$

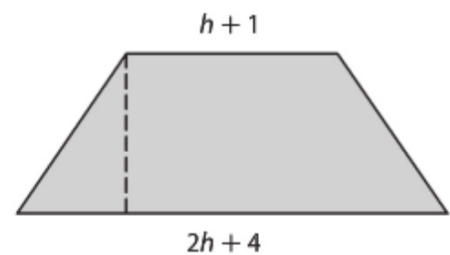
2B. $15t(10y^3t^5 + 5y^2t) - 2y(yt^2 + 4y^2)$

Area of trapezoid...

Standardized Test Example 3 Write and Evaluate a Polynomial Expression



GRIDDED RESPONSE The theme for a school dance is "Solid Gold." For one decoration, Kana is covering a trapezoid-shaped piece of poster board with metallic gold paper to look like a bar of gold. If the height of the poster board is 18 inches, how much metallic paper will Kana need in square inches?



Solve means $x=$

Example 4 Equations with Polynomials on Both Sides

Solve $2a(5a - 2) + 3a(2a + 6) + 8 = a(4a + 1) + 2a(6a - 4) + 50$.

Distributive property
Like terms
Zero pairs
 $x=$

Guided Practice

Solve each equation.

4A. $2x(x + 4) + 7 = (x + 8) + 2x(x + 1) + 12$

4B. $d(d + 3) - d(d - 4) = 9d - 16$

12. $-6(11 - 2c) = 7(-2 - 2c)$

13. $t(2t + 3) + 20 = 2t(t - 3)$

