

2.6: Distributive Property and Division

Warm-Up:

Take up quiz

More Practice with the Distributive Property:

In pairs:

1. Expand the following and then simplify by collecting like terms:

a) $\frac{3}{5} \left(2\frac{1}{3}a - 2\frac{1}{2}b \right)$

b) $8(2p + 2) + 2(p - 6)$

c) $5(3x + 4y) - 2(2x - 5y) + \frac{1}{2}(2x + 4y)$

d) $6(x + 5) - 2x$

Division

Dividing polynomials is like doing the OPPOSITE of the distributive property. When dividing by a monomial, EACH term of the polynomial must be divided by the monomial.

RECALL: $\frac{36 + 12}{3} = \frac{36}{3} + \frac{12}{3}$

Examples

1. Expand the following and then simplify by collecting like terms:

$$\text{a) } \frac{25x^2 - 35x}{5}$$

$$\text{b) } \frac{18y + 54}{9}$$

$$\text{c) } \frac{14x^3 + 21x^2 - 7x}{7x}$$

$$\text{d) } \frac{x^3y - x^2y^2 + xy^3}{xy}$$

$$\text{e) } \frac{50abc + 40ac - 20bc}{-10c}$$

$$\text{f) } \frac{12m^2n - 6mn + 2mn^2}{2mn}$$

$$\text{g) } \frac{35v^3w^2 - 21v^2w^3}{-7vw^2}$$

Homework: p.263 #7, Pg 271 #4, Pg 272-273 #7, 8e-h, 12, 14, 15