Algebra: Monomials

Multiplying and Dividing

Multiplying Monomials : By a Constant

———

When multiplying a monomial by a constant, all we do is multiply the coefficient!

ex.

$5 \times (-2a^2) = (5 \times -2) \ a^2$

$\qquad\qquad = -10a^2$

Multiplying Monomials : By a Constant

———

ex.

$-8 \times 7y^3 =$

Multiplying Monomials: By a Monomial

———

When multiplying a monomial with another monomial, we multiply the coefficients together and the variables together.

Multiplying Monomials: By a Monomial

———

Ex.

(6x)(7y)= (6*7)(x*y)

        = 42xy

Ex.

(5a)(6b)(2c) =

Multiplying Monomials: By a Monomial

———

When multiplying and we have the same variables, we multiply the coefficients and then we *add* the exponents.

Ex. -6a x 2a

Well, this is the same thing as saying:

$-6a^1 \times 2a^1 = (-6 \times 2)(a^1 \times a^1)$

$\qquad\qquad = -12(a^{1+1})$

$\qquad\qquad = -12\ a^2$

Multiplying Monomials: By a Monomial

— — —

Ex.

$(-9a)(2a^2)(-1a^3)=$

Multiplying Monomials: By a Monomial

— — —

Ex.

$(2x)(3x^3)(5) =$

Dividing Monomials: By a Constant

———

To divide a monomial by a constant, we divide the coefficients.

Ex.

$6x^2 \div -3 = (6 \div -3)x^2$

$$= -2x^2$$

Dividing Monomials: By a Constant

———

Ex.

−24abc ÷ −8

Homework

Math 3000 - Page 77 #13, 14, 18

Page 78 #19