

DO NOW

Simplify: $\frac{-2a^{-3}b^4c^{-2}}{14a^{-3}b^3c^5}$

$$\frac{-2b^4a^3}{14b^3c^5a^5c^2}$$

$$\frac{-b}{7a^2c^7}$$

Polynomial Operation Review

Monomial Rules:

$$x^a \times x^b = x^{a+b}$$

$$(x^a)^b = x^{ab}$$

$$x^a \div x^b = x^{a-b}$$

$$(mn)^a = m^a n^a$$

$$x^0 = 1$$

$$x^{-n} = \frac{1}{x^n}$$

	$\times$	$\div$	$(a)^z$	+ or -
exponent	add	subtract	multiply	keep
coefficient	multiply	divide	raise to power	+ or -
base	keep	keep	keep	keep

↑
Same
"last name"

***Worksheet - Monomial Diamond Review

MULTIPLICATION / DIVISION:

1. (monomial)(polynomial) - distribute
2. (binomial)(binomial) - FOIL
3. (binomial)(polynomial) - "Superfoil"
4. $(\text{binomial})^2$ - $\begin{matrix} \text{Square} \\ 1^{\text{st}} \text{ term} \end{matrix} + \begin{matrix} \text{twice the} \\ \text{product of} \\ \text{both terms} \end{matrix} + \begin{matrix} \text{Square} \\ \text{last term} \end{matrix}$
5. $(a+b)(a-b) = a^2 - b^2$
6. $\frac{\text{polynomial}}{\text{monomial}}$ - separate and divide

Discuss how you would simplify the expression:

$$(3x+1)(x^2+2x-1)$$

"Superfoil"

$$3x(x^2+2x-1)$$

distribute

$$(3x+1)(2x-1)$$

FOIL

$$(3x+1) - (2x-1)$$

↑ keep signs ↑ change signs

$$3x + 1(x^2+2x+1)$$

distribute

$$(3x+1)(3x-1)$$

" $a^2 - b^2$ "

HOMEWORK

Mixed Polynomial Operations Worksheet