Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Algebra 1 S-1

May 8 , 2020

Algebra 1 S2
Lesson: May 7, 2020

Objective/Learning Target:

Students will find equivalent expressions using the quotient rule of exponents.

Brainstarter

"Remember
Take Notes"

Let's Get Started

Watch Video 1:

Remember that $x^a / x^n = x^{a-n}$

You just subtract the exponents!

Your First Example

$$\frac{x^5}{x^3}$$

Remember just subtract

$$x^{5-3}$$

$$x^2$$

Your Second Example

$$\frac{-2x^4}{4x^2}$$

$$\frac{-2}{4}\left(x^{4-2}\right)$$

$$\frac{-1}{2}x^2$$

That's right! group the coefficients together, divide them and then group the like bases and subtract

Let's try a little harder example...

$$\frac{6g^5n^6}{4gn}$$

$$\frac{6}{4}(g^{5-1})(n^{6-1})$$

$$\frac{3g^4n^5}{3}$$

It's the same thing, group coefficients and divide then subtract exponents!

By Jove I think you've got it!

$$\frac{2w^{-4}}{3w^{-2}}$$

$$\frac{2}{3}w^{-4-2}$$

$$\frac{2w^{-6}}{3}$$

$$\frac{2}{3w^{6}}$$

You can't have a negative exponent, move it to the denominator

This example will be the ultimate test of your expertise! Private no assistance please!

$$\frac{14x^4y^7}{2x^5y^4}$$

$$\frac{14}{2}\ x^{4-5}\ y^{7-4}$$

$$7x^{-1}y^3$$

$$\frac{7y^3}{x}$$

yippee!

Now it's your turn!

1). $\frac{3r^3}{2r}$

2). $\frac{10p^4}{6p}$

3). $\frac{12yx^4}{10yx^8}$

4). $\frac{5n^8}{20n^8}$

Answer Key:

Once you have completed the problems, check your answers here.

1). $\frac{3r^3}{2r}$

$\frac{3r^2}{2}$

2).

$\frac{10p^4}{6p}$

$\frac{5p^3}{3}$

3).

$\frac{12yx^4}{10yx^8}$

$\frac{6}{5x^4}$

4).

$\frac{5n^8}{20n^8}$

$\frac{1}{4}$

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

Finding equivalent expressions using the quotient rule of exponents.