March.4th, 2016

Unit 3 Day 5

3-4 Negative Exponents + Flipping

Negative exponents create a "flip" effect.

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

$= \left(\frac{5}{3}\right)^{2}$

$= \frac{25}{9}$

2) 3^{-4}

$= \frac{1}{3^4}$

3) $\left(\frac{5}{6}\right)^{-1}$

$= \frac{6}{5}^{1}$

$= \frac{6}{5}$

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

$= \frac{3^3}{2^4}$

$= \frac{27}{16}$

* Bases with negative exponents are flipped! Positive exponents are not.

5) $5x^{-3}$

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

6) $\frac{2^2 \cdot 3^{-2}}{4^{-1}}$

$= \frac{2^2 \cdot 4^1}{3^2}$

$= \frac{16}{9}$

7) $\frac{3^{-2} \cdot 3^5}{(3^{-3})^{-2}}$

$= \frac{3^3}{3^6}$

$= 3^{-3}$

$= \frac{1}{3^3}$

$\frac{3^3}{3^6} = \frac{1}{3^3}$

8) $\frac{(2^{-2}x^3)^{-4}}{(2^3x^4)^{-4}}$

$= \frac{2^8 x^{-12}}{2^{-12}x^{-16}}$

$8 - -12$

$-12 - -16$

$= 2^{20}x^4$

Practice 3-5