Exponents III

Use the factor tiles to model each expression and then simplify.

1. $\frac{x^3}{x^5}$	2. $\frac{y}{y^4}$	3. $\frac{x^2y^2}{x^4y^3}$	4. $\frac{3^3}{3^5}$

Now, use your rule for dividing bases with exponents to write each expression as a base raised to a power. (Not as a fraction).

5. $\frac{x^3}{x^5}$	6. $\frac{y}{y^4}$	7. $\frac{x^2y^2}{x^4y^3}$	8. $\frac{3^3}{3^5}$

Simplify the following expressions.

9. $\frac{a^{-2}}{a^5}$	10. $\frac{3x^3}{6x^{-2}}$	11. $\left(\frac{4ab^{-4}}{a^{-3}}\right)^2$

More exploration with powers of 10…

In your Day 4 homework, you completed part of the table below. Use the pattern in your previous work to complete the remaining rows. An example is given.

	As a decimal	As a Fraction
$10^3 =$	1,000	$\frac{1,000}{1}$
$10^2 =$		
$10^1 =$		
$10^0 =$		
$10^{-1} =$		
$10^{-2} =$		
$10^{-3} =$		