Name: Key Date: 10/2/17 Period: All Pre Algebra

Review for Unit 1a Test

Test Date 10/4/17

Simplify (No Negative Exponents)

$\frac{3^4}{9} = \frac{3 \cdot 3 \cdot 3 \cdot 3}{9} = \frac{81}{9} = 9$

$\frac{2^2}{2^{-2}} = 2^{2-(-2)} = 2^{2+2} = 2^4 = 16$

$\frac{4^2}{(-2)^3} = \frac{4 \cdot 4}{(-2)(-2)(-2)} = \frac{16}{-8} = -2$

$\frac{6^2}{3^{-2}} = 6^2 \div \frac{1}{3^2} = 6^2 \cdot 3^2 = 36 \cdot 9 = 324$

Fill in the missing values

$x^4 \cdot x^{\square} = 1$ $\quad x^{4+\square} = x^0 = 1$, $\square = -4$

$\frac{a^{12}}{a^{\square}} = \frac{1}{a}$ $\quad a^{12-\square} = a^{-1} = \frac{1}{a}$, $\square = 13$

Name: Date: Period:

True or False

$$-4^4 = (-4)^4$$

$-4 \cdot 4 \cdot 4 \cdot 4 \neq (-4)(-4)(-4)(-4)$ False

$$\left(\frac{2^5 x^4 y^{-2}}{3^4 x^5}\right)^3 = \frac{2^{15}}{3^{12} x^3 y^6}$$

① simplify inside first

True

$\left(\frac{2^5}{3^4 x^1 y^2}\right)^3 = \frac{2^{5\cdot 3}}{3^{4\cdot 3} x^{1\cdot 3} y^{2\cdot 3}} = \frac{2^{15}}{3^{12} \cdot x^3 \cdot y^6}$ They match!

$$x^{-1} = -1$$

$\frac{1}{x} = -1$ False

Classify each real number as rational or irrational

$2 \cdot \pi$, $\sqrt{11}$, $-\frac{7}{9}$, 1.35 , 15%

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