Name: _____ Class: ____ Date: _____

1. Evaluate the number

$$\left(\frac{1}{2}\right)^2 4^{-1}$$

2. Simplify the expression:

$$\left(12x^5y^8\right)\left(\frac{1}{4}x^5y^5\right)$$

3. Simplify the expression:

$$\frac{a^{-5}b^7}{a^{-3}b^5}$$

Eliminate any negative exponents.

4. Simplify the expression:

$$\left(2u^6v^6\right)^4\left(3u^3v^7\right)^{-2}$$

Eliminate any negative exponents.

5. Simplify the expression:

$$x^{\frac{1}{3}}x^{\frac{1}{5}}$$

Assume that x is a positive number.

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6. Simplify the expression:

$$(36b)^{\frac{1}{2}}\left(8b^{\frac{1}{3}}\right)$$

Assume that b is a positive number.

7. Simplify the expression:

$$\left(\frac{a^{2}b^{-4}}{x^{-2}y^{2}}\right)^{3}\left(\frac{x^{-4}b^{-3}}{a^{\frac{3}{2}}y^{\frac{1}{3}}}\right)$$

Eliminate any negative exponents. Assume that all variables are positive numbers.