

Algebra I Practice A.APR.A.1: Division of Powers

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NAME: \_\_\_\_\_

Simplify:

1.  $\frac{12x^7y^4}{-6x^2y^5}$

2.  $\frac{-6x^6y^6}{-2x^4y^7}$

3.  $\frac{-27x^7y^2}{-9x^6y^5}$

4.  $\frac{-32x^6y^5}{-8x^5y^7}$

5.  $\frac{42x^4y}{-7xy^5}$

6.  $\frac{-25x^4y^3}{-5x^3y^5}$

7. Show two ways to use a calculator to find the value of  $\frac{3^6}{3^2}$ .

8. Write  $b^{12}$  as a quotient form  $\frac{b^m}{b^n}$  in four different ways. Use only positive exponents.

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[1]  $\frac{2x^5}{y}$

[2]  $\frac{3x^2}{y}$

[3]  $\frac{3x}{y^3}$

[4]  $\frac{4x}{y^2}$

[5]  $\frac{6x^3}{y^4}$

[6]  $\frac{5x}{y^2}$

[7]  $3^6 \div 3^2$  and  $3^6 - 2^2$

[8] Answers may vary. Sample:  $\frac{b^{24}}{b^{12}}$ ,  $\frac{b^{14}}{b^2}$ ,  $\frac{b^{13}}{b}$ ,  $\frac{b^{20}}{b^8}$