Name_____ Period_____ Date_____

Simplify. Your answer should contain only positive exponents. **Show your work!**

1: $\frac{7^9}{7^4} =$

2: $\frac{13^8}{13^5} =$

3: $\frac{15^3}{15^3} =$

4: $\frac{7^9}{7^4} =$

5: $\frac{b^6}{b^3} =$

6: $\frac{m^3}{m^4} =$

7: $\frac{x^{10}}{x^3} =$

8: $\frac{c^7}{c^7} =$

9: $\frac{x^4}{x^6} =$

10: $\frac{b}{b^5} =$

11: $\frac{2x^4}{x} =$

12: $\frac{8n^4}{10n^6} =$

13: $\frac{12m^2}{10m^5} =$

14: $\frac{7c^2}{14c^1} =$

15: $\frac{5b^4}{10b^5} =$

16: $\frac{6n^7}{18n^5} =$

17: $\frac{6^4 \cdot 6^2}{6^3} =$

18: $\frac{5^4}{5^3 \cdot 5^3} =$

19: $\frac{m^4}{m^2 \cdot m^3} =$

20: $\frac{7n^2 \cdot n^2}{14n^3} =$

23: Complete the following equation to show how you can find the base and exponent of the quotient when you divide two powers with the same base. (Assume a is not 0). Explain your reasoning.

$\frac{a^m}{a^n} = ?$