

vs of Exponents

Date _____ Period _____

Simplify. Your answer should contain only one base.

1) $[2^2 \times (2^2)^3]^2$

2) $[6^3 \times 6^3 \times 6^2]^2$

3) $5^3 \times 5^2 \times (5^0)^3$

4) $6 \times (6^2)^3$

5) $(4^3)^2 \times 4^2$

6) $6 \times (6^3)^2$

7) $\frac{3^3 \times 3^3}{3^3}$

8) $\frac{2^0 \times 2^3}{2^2}$

9) $\frac{6 \times 6^2}{6}$

10) $\frac{4 \times 4^3}{4^2 \times 4^2}$

11) $\frac{6^2 \times 6^0}{6^2}$

12) $\frac{3^2}{3 \times 3^0}$

13) $\left(\frac{5}{5^3}\right)^3$

14) $\frac{6^3}{6^3}$

15) $\left(\frac{5^2}{5^3}\right)^0$

16) $\left[\frac{4^2}{(4^0)^2}\right]^3$

17) $\left(\frac{4^3}{4^2}\right)^3$

18) $\frac{(2^3)^2}{2}$

19) $\frac{(3^2)^3}{3^2 \times 3^3}$

20) $\frac{4^3 \times (4^2)^2}{4^2}$

21) $\frac{(2^2)^2}{2 \times 2^2}$

22) $\frac{(5^3 \times 5^2)^2}{5}$

23) $\frac{6^3 \times (6^3)^3}{6^0}$

24) $\frac{[2 \times (2^3)^0 \times (2^3)^2]^3}{2^0}$

Powers and Exponent laws

ALL QUESTIONS

Simplify each of the following

1) $201^6 \times 201^3$

2) $9^{18} \div 9^{12}$

3) $6^8 \times 6^{15} \div 6^7$

4) $(-7)^{11} \div (-7)^4 \times (-7)^5$

5) $\frac{3^{13} \times 3^{11}}{3^{20}}$

6) $\frac{10^{11}}{10^6} \times 10^2$

7) $2 \times 2^5 \times 2 \times 2^3 + 3^7 \times 3^{11} \div 3^2 \times 3$

For each of the following questions SIMPLIFY then evaluate

1) $7^{12} \times 7 \div 7^9 + 7^4$

2) $\frac{10^{15} \times 10^2}{10^8}$

3) $3^{27} \div 3^{22} - 3^2 \times 3$

4) $-2^9 \times 2^{11} \div 2^6 - 2^7 + 5$

5) $4^3(4^{12} \div 4^7) + 4^2$

6) $(-5)^9 \div (-5)^6 \times (-5)^1 + (-5)^{10} \div (-5^9)$