

Exponents Test Review

Date _____ Period _____

1) Write using exponents: $4 \cdot 4 \cdot x \cdot y \cdot y \cdot y \cdot z \cdot z$

2) $(y^8)^9$

A) $y^{\frac{8}{9}}$

B) y^{17}

C) $9y^8$

D) y^{72}

3) $(a^3b^4)^2$

4) $(-2a^3b)^4$

5) Simplify: $\left(\frac{4x^7}{x^2y^4}\right)^2$

A) $\frac{8x^{10}}{y^8}$

B) $\frac{8x^9}{y^6}$

C) $\frac{16x^{10}}{y^8}$

D) $\frac{16}{x^7y^8}$

6) $a^7 \cdot b^{14} \cdot a^6$

7) $8^3 \cdot 8^7$

8) $8a^4b^5 \cdot -5a^5b^6$

9) Which of the following are NOT equivalent to: $4x^{-2} \cdot 7x^{-3}$

10) Simplify: $\frac{4^m}{4^n}$

I. $28x^6$

IV. $28x^{-5}$

II. $\frac{1}{28x^5}$

V. $\frac{1}{28x^6}$

III. $\frac{28}{x^5}$

11) Which of the following are equivalent to the expression: $\frac{w^5 \cdot z^{13}}{z^6 \cdot w^2}$

I. $\frac{w^5 \cdot z^{13}}{w^2 \cdot z^6}$

II. $w \cdot z^{11}$

III. $\frac{z^{11}}{w}$

IV. $w^3 \cdot z^7$

12) What is equivalent to $\frac{5^{10}}{5^2}$?

A) 5^5

B) 5^{20}

C) 5^{12}

D) 5^8

13) $\frac{32a^6b^7}{4a^2b^5}$

A) $8a^4b^2$

B) $9a^{12}b^{35}$

C) $8a^8b^{12}$

D) $9a^4b^2$

14) $2^8 \cdot 2^{-5}$

15) $\frac{a^{18}}{a^{33}}$

16) $\frac{4x^3y}{x^4y^5} \cdot \frac{3x^2y}{24x}$

17) $\frac{7a^2b^0}{3b^5} \cdot \frac{18a^4b^9}{7a}$

18) $\frac{x^2y^7}{(xy)^3}$

19) $-\frac{7a^{-4}b^0}{c^{-5}}$

20) $\frac{36a^4b^5}{4a^{-2}b^8}$