

Match each property with the simplified form - not all answers will be used.

- |                                       |                      |              |
|---------------------------------------|----------------------|--------------|
| _____ 1. $a^m \cdot a^n$              | A. 1                 | H. $a^m$     |
| _____ 2. $(a^m)^n$                    | B. -1                | I. $a^{m+n}$ |
| _____ 3. $(ab)^m$                     | C. $a^{mn}$          | J. $a^{m-n}$ |
| _____ 4. $\frac{a^m}{a^n}$            | D. $\frac{a^m}{b^m}$ |              |
| _____ 5. $\left(\frac{a}{b}\right)^m$ | E. $a^m b^m$         |              |
| _____ 6. $a^0$                        | F. $a^n$             |              |
| _____ 7. $a^{-n}$                     | G. $\frac{1}{a^n}$   |              |

Evaluate each expression - please write your answer on the line provided.

- |                                            |                                           |
|--------------------------------------------|-------------------------------------------|
| _____ 8. $\frac{6^{20} \cdot 6^5}{6^{23}}$ | _____ 9. $5^{-2}$                         |
| _____ 10. $\frac{1}{2^{-2}}$               | _____ 11. $\frac{4^6}{4^2}$               |
| _____ 12. $-7^2$                           | _____ 13. $(1,291)^0$                     |
| _____ 14. $\left(\frac{1}{2}\right)^2$     | _____ 15. $\left(\frac{1}{2}\right)^{-2}$ |

Write each expression in simplest form - a.k.a. NO DECIMALS, NO NEGATIVE EXPONENTS

Please write your answer on the line provided.

\_\_\_\_\_ 16.  $x \cdot x \cdot x \cdot y \cdot y$

\_\_\_\_\_ 17.  $(x^5)^3$

\_\_\_\_\_ 18.  $(2x^4y)^3$

\_\_\_\_\_ 19.  $-\left(\frac{2x}{5y}\right)^4$

\_\_\_\_\_ 20.  $8^0 x^{-3}$

\_\_\_\_\_ 21.  $\frac{8a^4b^8}{4a^{-2}}$

\_\_\_\_\_ 22.  $\left(\frac{3}{xy}\right)^2 \cdot \left(\frac{x}{4y}\right)^2$

\_\_\_\_\_ 23.  $\frac{3y^{-3}}{5} \cdot \left(\frac{10x^7}{9y^8}\right)^2$