

Rules For Exponents Worksheet Answers

1. $a^2 \cdot a^3 =$

$$a^{2+3} = a^5$$

2. $3^5 \cdot 3^2 \cdot 3^{-1} =$

$$3^{5+2+(-1)} = 3^6$$

3. $m^6 \cdot n \cdot m^4 \cdot n^{-7} =$

$$m^{6+4} n^{1+(-7)} = m^{10} n^{-6}$$

4. $ab^3c^8 \cdot a^{-3}b^4c^2 =$

$$a^{1+(-3)} b^{3+4} c^{8+2} = a^{-2} b^7 c^{10}$$

5. $6^{12} \div 6^4 =$

$$6^{12-4} = 6^8$$

6. $\frac{x^8}{x^3} =$

$$x^{8-3} = x^5$$

7. $\frac{(-5)^{-2}}{(-5)^5} =$

$$(-5)^{-2-5} = (-5)^{-7}$$

8. $\frac{b^9}{b^{-2}} =$

$$b^{9-(-2)} = b^{9+2} = b^{11}$$

9. $(g^3)^4 =$

$$g^{3 \cdot 4} = g^{12}$$

10. $(x^{-1})^7 =$

$$x^{-1 \cdot 7} = x^{-7} = \frac{1}{x^7}$$

11. $(8^3)^8 =$

$$8^{3 \cdot 8} = 8^{24}$$

12. $((y^3)^2)^5 =$

$$y^{3 \cdot 2 \cdot 5} = y^{30}$$