

Name: _____ Date: _____ Pd: _____

For #'s 1 – 7, simplify. Leave no variables in the denominator. Box your FINAL ANSWER please.

1. $5(-3)^2$

2. $-(-4)^3$

3. $(14x)(2x)^3$

4. $\frac{(4x^2)^3}{8x^{10}}$

5. $\left(\frac{x^3}{y^5}\right)^6 \left(\frac{y^2}{x^4}\right)^5$

6. $\frac{16 \cdot 5^{1896}}{12 \cdot 5^{1893}}$

7. $\frac{(3^{1492})^{10}}{(3^{1491})^{10}}$

For #'s 8 – 17, simplify. Leave no negative exponents. Box your FINAL ANSWER please.

8. $10x^3 \cdot 3x^{-10}$

9. $(-6x^3y^{-2})^2(3x^{-5}y^3)^2$

10. $(12x^3y^{-4}) \div (20x^5y^{-4})$

11. $\frac{6}{x^{-4}} + \frac{5}{x^{-2}}$

12. $\frac{15x^2y^{-4}z^{-3}}{45x^{-3}y^5z^{-3}}$

13. $12x^{-\frac{3}{4}} \cdot 6x^{\frac{2}{3}}$

14. $\sqrt[6]{64x^{12}y^{-8}}$

15. $6x^{-\frac{2}{5}} \div 3x^{-\frac{3}{4}}$

16. $\frac{\sqrt[6]{125} \cdot \sqrt[6]{625}}{\sqrt{125}}$

17. $\frac{\sqrt[3]{x^7y^{13}}}{x^{-\frac{2}{3}}y^5}$

18. Simplify. Don't leave the power of the numerator greater than the power of the denominator.

$$\frac{\sqrt[6]{x^5} \cdot \sqrt[4]{x^3}}{\sqrt{x}}$$