Algebra II A   Name _____
6.1 Practice Quiz

Simplify the following exponents.		
1. $2^7 \cdot 2^9$	2. $x^0 + 2$	3. $\dfrac{-2x^3z^5}{12x^4z^2}$
4. $\left(2x^2\right)^5$	5. $\dfrac{x^{10}}{x^4}$	6. $\left(3a^3b^4\right)\left(5a^4b^2\right)$
7. $\left(-2m^4n^8\right)^2$	8. 4^{-3}	9. $\dfrac{5}{25x^{-4}}$
10. $\dfrac{-36a^4b^6c^4}{9a^{-3}b^8c^4}$	11. $\left(3a^3b^4\right)^2\left(5a^4b^2\right)$	12. $\dfrac{\left(2a^2bc^5\right)^2\left(4a^2b^7\right)}{4a^{-3}b^8c^4}$
13. $\left(\dfrac{5}{2}\right)^{-3}$	14. $\left(6.1\times10^5\right)\left(2.2\times10^6\right)$	15. $\dfrac{\left(9.9\times10^9\right)}{\left(1.5\times10^8\right)}$

16. Michigan contains some of the largest lakes in the world by surface area and volume. The largest lake in the world is the **Caspian Sea,** it has a surface area of $1.43 \; x \; 10^5$ **square miles.** The second largest lake in the world is **Lake Superior**, which has a surface area of approximately $3.2 \; x \; 10^5$ **square miles.** How much larger, with respect to surface area, is the Caspian Sea compared to Lake Superior?

17. Write and expression In simplified form for the Volume of the figure in terms of x if $V = \pi r^2 h$

2x

X^2