

M7A Chapter 4 practice test 2018

<p>1. Which expression is equivalent to $(-4)(-4)(-4)(-4)$?</p> <p>A. -4^1 B. $(-4)^4$ C. 4^{-2} D. $(-4)^2$</p>	
<p>2. A golf ball is dropped from the top of a cliff. After 9 seconds the ball hits the ground. The distance in feet the ball traveled can be estimated by $16(9)^2$. About how far did the ball drop?</p> <p>A. 81 feet C. 1296 feet B. 144 feet D. 2304 feet</p>	
<p>3. Evaluate $a^3 - b^2 + 18$ if $a = 4$ and $b = 8$.</p> <p>A. -3 B. -21 C. 14 D. 18</p>	
<p>4. Which expression represents $\frac{1}{9^6}$ using a negative exponent?</p> <p>A. -6^{-9} B. -9^{-6} C. 9^{-6} D. 6^{-9}</p>	
<p>5. What is the value of $6k^{-4}$ if $k = -1$?</p> <p>A. -24 B. 1 C. 6 D. 24</p>	
<p>6. Which expression is equivalent to the product of $s^{-8} \cdot s$?</p> <p>A. $\frac{1}{s^7}$ B. $\frac{8}{s^8}$ C. $-s^7$ D. $-8s^9$</p>	
<p>7. An astronomer finds that the diameter of asteroid A is roughly 10^{-3} kilometer, whereas the diameter of asteroid B is roughly 10^6 kilometers. About how many times as great is the diameter of asteroid B than asteroid A?</p> <p>A. 10^{-3} B. 10^3 C. 10^9 D. 10^{918}</p>	
<p>8. Which expression is equivalent to b^5?</p> <p>A. $\frac{b^8}{b^3}$ B. $\frac{b^{10}}{b^2}$ C. $\frac{b^{10}}{b^{-5}}$ D. $\frac{5}{b^{-5}}$</p>	
<p>9. The number of neurons in the neocortex of the human brain is 3×10^{10}. The neocortex of a gorilla contains 7.5×10^8 neurons. Which mammal has more neurons?</p>	

<p>10. Which number is less than 3.4×10^{-4}?</p> <p>A. 3.4×10^6 C. 3.4×10^2 B. 35,000 D. 3.4×10^{-6}</p>	
<p>11. In 2010, the population of India was about 1.2×10^9. The population of Germany was 81,859,000. About how many times greater was the population of India than the population of Germany in 2010?</p>	
<p>12. Livia entered China's 2010 automobile sales into her calculator. The number appeared on her screen as 1.8×10^7. Write this number in standard form.</p>	
<p>13. The average weight of an African elephant is 1.44×10^4 pounds and that of a white rhinoceros is 7.94×10^3 pounds. What is the approximate difference in weight of these two animals?</p> <p>A. 2.23×10^4 pounds C. 6.5×10^1 pounds B. 6.46×10^3 pounds D. 9.38×10^7 pounds</p>	
<p>14. If $y^3 = 512$, what is the value of y?</p>	
<p>15. Estimate $\sqrt{126}$ to the nearest tenth.</p>	
<p>16. Between which two consecutive integers on a number line does $\sqrt{47}$ lie? (consecutive numbers, such as 5, 6, 7, 8, 9, 10)</p>	
<p>17. Are all square roots irrational numbers? If not, provide a counterexample.</p>	
<p>18. Emma plans to add trim to the edges of a square table. The area of the table is 625 square inches. How many inches of trim does she need for the table?</p>	