

**M7A Chapter 4 Practice test 2021**

<p>1. Which expression is equivalent to <math>(-4)(-4)(-4)(-4)</math>?</p> <p>A. <math>-4^1</math>      B. <math>(-4)^4</math>      C. <math>4^{-2}</math>      D. <math>(-4)^2</math></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 <math>16(9)^2</math>. 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 <math>a^3 - b^2 + 18</math> if <math>a = 4</math> and <math>b = 8</math>.</p>	
<p>4. Which expression represents <math>\frac{1}{9^6}</math> using a negative exponent?</p> <p>A. <math>-6^{-9}</math>      B. <math>-9^{-6}</math>      C. <math>9^{-6}</math>      D. <math>6^{-9}</math></p>	
<p>5. What is the value of <math>6k^{-4}</math> if <math>k = -1</math>?</p>	
<p>6. Write the product of <math>s^{-8} \cdot s</math> using a positive exponent.</p>	
<p>7. An astronomer finds that the diameter of asteroid A is roughly <math>10^{-3}</math> kilometer, whereas the diameter of asteroid B is roughly <math>10^6</math> kilometers. About how many times as great is the diameter of asteroid B than asteroid A?</p> <p>A. <math>10^{-3}</math>      B. <math>10^3</math>      C. <math>10^9</math>      D. <math>10^{918}</math></p>	
<p>8. Which expression is equivalent to <math>b^5</math>?</p> <p>A. <math>\frac{b^8}{b^3}</math>      B. <math>\frac{b^{10}}{b^2}</math>      C. <math>\frac{b^{10}}{b^{-5}}</math>      D. <math>\frac{5}{b^{-5}}</math></p>	
<p>9. The number of neurons in the neocortex of the human brain is <math>3 \times 10^{10}</math>. The neocortex of a gorilla contains <math>7.5 \times 10^8</math> neurons. Which mammal has more neurons?</p>	

