

M7A Chapter 4 Practice test

<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>B</p>
<p>2. A baseball is dropped from the top of a water tower. 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>C</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>D</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>C</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>C</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>A</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>C</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>A</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>Human</p>

