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| <p>1. Solve for x to the <i>nearest hundredth</i>: $2^x = 28$</p> | <p>2. If $10^x = m$, then 10^{3x} equals</p> <p>(1) $3m$ (3) 3^m (2) $3 + m$ (4) m^3</p> | <p>1. _____</p> <p>2. _____</p> |
| <p>3. The equation for interest compounded continuously is $A = P(2.7)^{rt}$, where A = final amount of money, P = original amount of money, r = interest rate, t = time (in years). If Scarlet invests \$700, approximately how many years, <i>to the nearest year</i>, would it take for that money to become \$800 at an interest rate of 6%?</p> | | <p>3. _____</p> |
| <p>4. Meteorologists can determine how long a storm lasts by using the function $t(d) = 0.07d^{\frac{3}{2}}$, where d is the diameter of the storm, in miles, and t is the time, in hours. If the storm lasts 4.75 hours, find its diameter, to the <i>nearest tenth of a mile</i>.</p> | | <p>4. _____</p> |
| <p>5. A ball is thrown into the air straight up so that its height is represented by the equation $h(t) = -5t^2 + 15t$. At what time t, in seconds, other than 0, does the ball hit the ground?</p> | <p>6. If $f(x) = 2^x - 1$ and $g(x) = x^2 - 1$, determine the value of $(f \circ g)(3)$.</p> | <p>5. _____</p> <p>6. _____</p> |
| <p>7. Which transformation is a direct isometry?</p> <p>(1) D_2 (3) $r_{y\text{-axis}}$ (2) D_{-2} (4) $T_{2,5}$</p> | <p>8. Solve algebraically for x: $64^{x-2} = 256^{2x}$</p> | <p>7. _____</p> <p>8. _____</p> |