



Timester Challenge

Index Notation



<p>1) Simplify $d^2 \times d^4$</p> <p>2) Simplify $\frac{a^9}{a^3}$</p> <p>3) Simplify b^0</p> <p style="text-align: right;">Bronze ★</p>	<p>1) Simplify $\frac{28x^4y^2}{7x^3y^5}$</p> <p>2) Simplify $\frac{3t^5 \times 4t^2}{2t^3}$</p> <p style="text-align: right;">Silver ★</p>	<p>Mark says that $(2x)^3$ is always greater than $2x$. Decide whether he is correct or not. Give a reason for your answer.</p> <p style="text-align: center;">Correct <input type="checkbox"/> Incorrect <input type="checkbox"/></p> <p style="text-align: right;">Gold ★</p>
<p>1) Simplify $m^8 \div m^2$</p> <p>2) Simplify g^{-1}</p> <p>3) Simplify $(m^3)^4$</p> <p style="text-align: right;">Bronze ★</p>	<p>The square of x is 5. Circle the value of x^3 Circle the correct answer</p> <p style="text-align: center;">125 25 $\sqrt[3]{25}$ $5\sqrt{5}$ 15,625</p> <p style="text-align: right;">Silver ★</p>	<p>Jo says if $2^{2x} = \frac{1}{64}$. Then x must be 3. Is Jo correct? Give a reason for your answer.</p> <p style="text-align: center;">Correct <input type="checkbox"/> Incorrect <input type="checkbox"/></p> <p style="text-align: right;">Gold ★</p>



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Answers



<p>1) Simplify $d^2 \times d^4 = d^6$</p> <p>2) Simplify $\frac{a^9}{a^3} = a^6$</p> <p>3) Simplify $b^0 = 1$</p> <p style="text-align: right;">Bronze ★</p>	<p>1) Simplify $\frac{28x^4y^2}{7x^3y^5} = \frac{4x}{y^3}$ or $4xy^{-3}$</p> <p>2) Simplify $\frac{3t^5 \times 4t^2}{2t^3} = \frac{12t^7}{2t^3} = 6t^4$</p> <p style="text-align: right;">Silver ★</p>	<p>Mark says that $(2x)^3$ is always greater than $2x$. Decide whether he is correct or not. Give a reason for your answer.</p> <p>Correct <input type="checkbox"/> Incorrect <input checked="" type="checkbox"/></p> <p>If $x = \frac{1}{2}$ then $(2x)^3 = \left(2 \times \frac{1}{2}\right)^3 = 1^3 = 1$ Also $2x = 2 \times \frac{1}{2} = 1$ <i>Answers are the same</i></p> <p style="text-align: right;">Gold ★</p>
<p>1) Simplify $m^8 \div m^2 = m^6$</p> <p>2) Simplify $g^{-1} = \frac{1}{g}$</p> <p>3) Simplify $(m^3)^4 = m^{12}$</p> <p style="text-align: right;">Bronze ★</p>	<p>The square of x is 5. Circle the value of x^3 Circle the correct answer</p> <p>$x = \sqrt{5}, x^2 = \sqrt{5} \times \sqrt{5} = 5, x^3 = 5 \times \sqrt{5}$</p> <p>125 25 $\sqrt[3]{25}$ $5\sqrt{5}$ 15,625</p> <p style="text-align: right;">Silver ★</p>	<p>Jo says if $2^{2x} = \frac{1}{64}$. Then x must be 3. Is Jo correct? Give a reason for your answer.</p> <p>Correct <input type="checkbox"/> Incorrect <input checked="" type="checkbox"/></p> <p>No because $2^{2 \times 3} = 2^6 = 64$, you want $\frac{1}{64}$. Therefore $x = -3$.</p> <p style="text-align: right;">Gold ★</p>