Exercise Set 4 (Calculator)

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If $n^2 = \sqrt{64^4}$ and $n > 0$, what is the value of n?

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What is the smallest integer value of m such that $\frac{1}{10^m} < 0.000025$?

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If $\frac{3}{3^{-k}} = 9\sqrt{27}$, what is the value of k?

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If $(x^m)^3(x^{m+1})^2 = x^{37}$ for all values of x, what is the value of m?

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If $9\sqrt{12} - 4\sqrt{27} = n\sqrt{3}$, what is the value of n?

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If $8^{\frac{1}{6}} = \left(2^{-\frac{1}{12}}\right)^{-n}$, what is the value of n?

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What is one possible value for x such that $0 < \frac{4}{5}x < \sqrt{x} < x$?

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Which of the following is equivalent to $\frac{4}{2^{-2}(x+x)(x+x)}$ for all positive values of x?

A) $\frac{1}{x^4}$ B) $\frac{4}{x^2}$ C) $\frac{1}{4x^2}$ D) $\frac{16}{x^4}$

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The square root of a certain positive number is twice the number itself. What is the number?

A) $\frac{1}{8}$ B) $\frac{1}{4}$ C) $\frac{1}{2}$ D) $\frac{1}{\sqrt{2}}$

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Which of the following is equivalent to $\frac{2m\sqrt{2n} + m\sqrt{18n}}{m\sqrt{2}}$ for all positive values of m and n?

A) $3m\sqrt{3n}$

B) $5m\sqrt{2}$

C) $3\sqrt{3n}$

D) $5\sqrt{n}$

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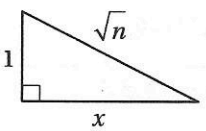

In the figure above, if $n > 1$, which of the following expresses x in terms of n?

A) $\sqrt{n^2 - 1}$

B) $\sqrt{n-1}$

C) $\sqrt{n+1}$

D) $\frac{\sqrt{n-1}}{2}$