## Solving Radical Equations Example 3

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\sqrt{3 x+1}=5
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\sqrt{3 x+1}^{2}=5^{2}
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Example: Find solutions to the equation:

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Leaving us with the equation:

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Subtracting 1 from both sides

$$
3 x+1-1=25-1
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Conclusion: The solution to $\sqrt{3 x+1}=5$ is: $x=8$

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Conclusion: The solution to $\sqrt{3 x+1}=5$ is: $x=8$
Checking the solution $x=8$ we get:

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\sqrt{3 \cdot 8+1}=\sqrt{25}
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Conclusion: The solution to $\sqrt{3 x+1}=5$ is: $x=8$
Checking the solution $x=8$ we get:

$$
\begin{aligned}
\sqrt{3 \cdot 8+1} & =\sqrt{25} \\
& =5
\end{aligned}
$$

