


EXTRANEOUS SOLUTIONS: GUIDED NOTES

Definition

Extraneous solution: an extra result that does not make the original equation true

Example: Solve: $\sqrt{m} = -1$
 $(\sqrt{m})^2 = (-1)^2$



But $m = 1$ does not work: $m = 1$

Example Problems

Find the solution(s) to each of the following equations. Check for extraneous solutions.

1) $(x+3)^{\frac{1}{4}} + 8 = 6$

2) $\sqrt{8x+1} = x-1$

Hint: When there are multiple radicals, isolate one radical, then take both sides to the power. Repeat as needed.

3) $\sqrt{2x+3} + \sqrt{2x} = 3$