Honors Algebra II

Notes Section 3.6

Solve Radical Equations

STEPS

1) Isolate the Radical

2) Square/Cube/etc. both sides of the equation

3) Simplify and Solve

EXAMPLE 1   Solve.

a) $\sqrt[3]{2x} + 7 = 3$ b) $\sqrt[3]{x} - 9 = -1$ c) $\sqrt{x} + 25 = 4$

d) $\sqrt{5x} - 9 = 11$ e) $2\sqrt[3]{x} - 3 = 3$

EXAMPLE 2 Solve.

a) $(x + 2)^{3/4} - 1 = 7$ b) $-2/3x^{1/5} = -2$ c) $(x - 5)^{4/3} = 81$

EXAMPLE 3 Solve.

a) $\sqrt{2x + 5} = \sqrt{x + 7}$ b) $\sqrt{x + 6} - 2 = \sqrt{x - 2}$

c) $\sqrt{x + 2} + 1 = \sqrt{3 - x}$