Homework: Solving Equations with Rational Exponents

Solve each of the following equations.

1) $2x^{3/2} = 16$

2) $-(x + 7)^{\frac{3}{4}} = 64$

3) $(2x - 20)^{5/2} = 3125$

4) $x^{-1/3} = 12$

5) $\frac{(5x-11)^{3/7}}{4} = 6.75$

6) $(-x + 6.5)^{11/17} = 1$

7) Define extraneous solution.

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Use your definition to explain why, when checking your solution(s), you must plug your solution(s) into the original equation.

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8) Solve for p in the following equation:
$$m(n + p)^{q/r} - s = t$$