Hints on Solving Equations

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1. $(x-3)^2 = 4$ Quadratic. Take sq. root of each side. Remember $\pm$

3. $\log_2(x-3) = 4$ Put in exponential form

$\Rightarrow 2^4 = x-3$

17. $x^2 - 4x = -2$ Put in standard form. Use quadratic formula.

4. $2^{x-3} = 4$ Write each side in terms of base 2. Set exponents equal to each other

$\Rightarrow 2^{x-3} = 2^2$

Note difference in how these similar equations are solved

11. $\log(x-3) + \log(4) = \log(x)$ Apply properties of logs to get a single logarithm on the left side.

12. $x^3 - 4x^2 + x + 6 = 0$ Use rational root theorem and synthetic division to find first solution.

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8. $2^{x-1} = 9$ Since we cannot write each side in terms of the same base, take the log of each side