

## Error Analysis: Power Equations

Original Work	What's the mistake?	Correct Work
<p>1. <math>1 - x^{11} = -4</math></p> $\frac{+3}{+3} \quad \frac{+3}{+3}$ $\frac{1 - x^{11} + 3}{3} = \frac{-4 + 3}{3}$ $\frac{(x^{11})^{\frac{1}{11}}}{3} = \frac{-1}{3}$ $\frac{(x^{11})^{\frac{1}{11}}}{3} = \frac{-1}{3}$ $x = (-3)^{\frac{11}{11}} = 3(\sqrt[11]{-3})$ <p style="text-align: center;"><u>WRONG</u></p>		<p><math>1 - x^{11} = -4</math></p>
<p>2. <math>x^3 + 12 = 20</math></p> $\frac{-12}{-12} \quad \frac{-12}{-12}$ $\frac{(x^3)^{\frac{1}{3}}}{3} = \frac{(8)^{\frac{1}{3}}}{3}$ $x = 8^{\frac{1}{3}} = \sqrt[3]{8}$ <p style="text-align: center;"><u>WRONG</u></p>		<p><math>x^3 + 12 = 20</math></p>
<p>3. <math>5x^5 - 300 = -60</math></p> $\frac{+300}{+300} \quad \frac{+300}{+300}$ $\frac{\frac{5}{5}x^5}{5} = \frac{240}{5}$ $\frac{\sqrt[5]{x^5}}{5} = \sqrt[5]{48}$ $x = \sqrt[5]{48}$ <p style="text-align: center;"><u>WRONG</u></p>		<p><math>5x^5 - 300 = -60</math></p>