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/m143.fa07/handouts143/q910/q910_143

These are alleged answers. For each error herein, you get extra-credit points for being the first to report it by e-mail.

- 1 Here's one possible solution path:

$$\begin{aligned} \frac{2}{x+3} - \frac{1}{x^2+7x+12} &= \frac{2}{(x+3)} - \frac{1}{(x+3)(x+4)} \\ &= \frac{2(x+4)}{(x+3)(x+4)} - \frac{1}{(x+3)(x+4)} \\ &= \frac{2x+8-1}{(x+3)(x+4)} \\ &= \frac{2x+7}{(x+3)(x+4)} \end{aligned}$$

This is problem 1.4: 43.

- 2 Begin by reminding oneself that $(A+B)(A-B) = A^2 - B^2$.

$$\begin{aligned} \frac{3}{4x+\sqrt{7}} &= \left(\frac{3}{4x+\sqrt{7}} \right) \left(\frac{4x-\sqrt{7}}{4x-\sqrt{7}} \right) \\ &= \frac{3(4x-\sqrt{7})}{(4x+\sqrt{7})(4x-\sqrt{7})} \\ &= \frac{3(4x-\sqrt{7})}{16x^2-7} \end{aligned}$$

This is like problems 1.4: 73-78.