Partial Fraction Decomposition

Version 2

Name: _____ **Date**: _____ **Score**: _____

Direction: Decompose the given rational expression into partial fractions. Show all your work in the space provided.

1) $\dfrac{-x-3}{x^2+2x} =$

2) $\dfrac{x-5}{x^2+5x-14} =$

3) $\dfrac{x^2+1}{(x+3)^3} =$

4) $\dfrac{2x^2-3x-2}{x^3+2x} =$

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Direction: Decompose the given rational expression into partial fractions. Show all your work in the space provided.

1) $\dfrac{-x-3}{x^2+2x} = \dfrac{1}{2(x+2)} - \dfrac{3}{2x}$

2) $\dfrac{x-5}{x^2+5x-14} = \dfrac{4}{3(x+7)} - \dfrac{1}{3(x-2)}$

3) $\dfrac{x^2+1}{(x+3)^3} = \dfrac{1}{x+3} - \dfrac{6}{(x+3)^2} + \dfrac{10}{(x+3)^3}$

4) $\dfrac{2x^2-3x-2}{x^3+2x} = \dfrac{3x-3}{x^2+2} - \dfrac{1}{x}$