

M3H U3 Day 9 HW – Partial Fractions

Show all your work to decompose the rational function into it's partial fractions.

1.  $\frac{3x + 50}{(x - 9)(x + 2)}$

2.  $\frac{7x - 4}{x^2 - x - 12}$

3.  $\frac{4}{2x^2 - 5x - 3}$

4.  $\frac{5x - 1}{(x - 2)(x + 1)}$

5.  $\frac{9x - 4}{(x - 3)(x + 5)}$

6.  $\frac{x}{(x - 3)(x - 2)}$

7.  $\frac{1}{x(x - 1)}$

KEY: 1.  $\frac{7}{x - 9} - \frac{4}{x + 2}$     2.  $\frac{24}{7(x - 4)} + \frac{25}{7(x + 3)}$     3.  $\frac{4}{7(x - 3)} - \frac{8}{7(2x + 1)}$   
 4.  $\frac{3}{x - 2} + \frac{2}{x + 1}$     5.  $\frac{23}{8(x - 3)} + \frac{49}{8(x + 5)}$     6.  $\frac{3}{x - 3} - \frac{2}{x - 2}$     7.  $\frac{1}{x - 1} - \frac{1}{x}$