Professor: Fred Khoury

Write the partial fraction decomposition of each rational expression

1.
$$\frac{2s-1}{(s+1)(s-2)}$$

2.
$$\frac{2s-2}{(s-4)(s+2)}$$

3.
$$\frac{7s^2 + 3s + 16}{(s+1)(s^2 + 4)}$$

4.
$$\frac{1}{s^2 - 4}$$

5.
$$\frac{7s^2 + 20s + 53}{(s-1)\left(s^2 + 2s + 5\right)}$$

6.
$$\frac{s^2 + 1}{s^3 - 2s^2 - 8s}$$

7.
$$\frac{1}{x^2 + 2x}$$

8.
$$\frac{2x+1}{x^2-7x+12}$$