MATH 120A

Quiz 3

2004 Sep 13

Name: ANSWER KEY Score: _____

Simplify: $\dfrac{x}{x^2+x-2} - \dfrac{2}{x^2-5x+4} = \dfrac{x}{(x+2)(x-1)} - \dfrac{2}{(x-4)(x-1)}$

$$= \frac{x}{(x+2)(x-1)} \cdot \frac{x-4}{x-4} - \frac{2}{(x-4)(x-1)} \cdot \frac{x+2}{x+2}$$

$$= \frac{x^2-4x}{(x+2)(x-1)(x-4)} - \frac{2x+4}{(x+2)(x-1)(x-4)}$$

$$= \frac{x^2-4x-2x-4}{(x+2)(x-1)(x-4)} = \boxed{\frac{x^2-6x-4}{(x+2)(x-1)(x-4)}}$$