

MATH134: Worksheet 8

Due on November 20, 2020

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Problem 1A

Add the fractions on the left and set the numerators of the two sides equal:

$$\frac{A}{x-1} + \frac{B}{x-2} = \frac{2x+3}{(x-1)(x-2)}$$

The numerators are the same for every value of x . Pick two "nice" values of x to find A and B quickly.

$$2x+3 = A(x-2) + B(x-1)$$

$$x=2 \implies B=7$$

$$x=1 \implies A=-5$$

$$\frac{2x+3}{(x-1)(x-2)} = -\frac{5}{x-1} + \frac{7}{x-2}$$