

Homework 2 - due Mon Feb 2.

1. Suppose that the function $f(x)$ is given by

$$f(x) = \frac{1}{x(x^2 - x - 6)}.$$

Evaluate $\int f(x) dx$ by using partial fractions. Show your steps. Then write down the definite integral, $\int_1^2 f(x) dx$.

2. Section 3.2, Problem 7.
3. Section 3.2, Problem 10.
4. Section 3.3, Problem 32.
5. Section 3.3, Problem 38.

In all problems, please show all steps.