

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise. If you finish early, you may leave with my approval.

1. (0 points) Write the sum $\sum_{k=1}^3 \frac{k-1}{k}$ without sigma notation. Then evaluate it.

2. (0 points) Suppose that f and h are integrable and that

$$\int_1^9 f(x) dx = -1, \int_7^9 f(x) dx = 5, \int_7^9 h(x) dx = 4$$

Find

(a) $\int_9^7 [h(x) - f(x)] dx$

(b) $\int_7^9 [2f(x) - 3h(x)] dx$

(c) $\int_1^7 f(x) dx$

3. (0 points) Evaluate the following integrals:

(a) $\int_{-2}^2 (x^3 - 2x + 3) dx$

(b) $\int_{1/2}^{3/2} (-2x + 4) dx$ (Use area)