$\qquad$
November 15, 2017 $\qquad$

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Use partial fractions to evaluate. Show all work.

$$
\int \frac{2 x^{4}-x^{3}+4 x^{2}}{x^{3}+4 x} d x
$$

2. (2.5 points) Evaluate the limit: $\lim _{x \rightarrow 0} \frac{\tan x-x}{x^{3}}$
3. (2.5 points) Write as a limit of proper integrals and evaluate.

$$
\int_{0}^{2} w^{2} \ln w d w
$$

