

Please show **all** your work! Answers without supporting work will not be given credit.  
Write answers in spaces provided.

Name: \_\_\_\_\_

1. [5pts] Consider the function  $f(x) = \frac{x^5}{10} + x^4 + 2$ . Find the x-coordinate of all the inflection points.
2. [5pts] Consider the function  $f(x) = 2\ln(x^2 + 1)$ . Find the largest open interval(s) on which the function is both concave up and increasing.