

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

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

1. [5pts] Find the derivative of  $y = \ln \sqrt{\frac{4x+3}{x^2+2}}$
2. [5pts] Find the second derivative of  $y = \sin^2(x)$ . **Simplify!**