

Math 152 Quiz #2
January 20, 2010

Name: _____

Show all work on a separate sheet. Put a box around your final answer. No calculators are permitted.

1. (3 pts.) Find the exact area between the curve $f(x) = \frac{5}{x^2} + 2$ and the x -axis from $x = 1$ to $x = 5$.

2. (2 pts.) Evaluate $\int x^3(1 - 5x) dx$.

3. (3 pts.) A European swallow flies along a straight path with an airspeed velocity given by
 $v(t) = 12 - 4t$ in km/hour at t hours for $t \geq 0$.

What is the **distance traveled** by the swallow after 5 hours? (Include units in your answer.)

4. (2 pts.) Evaluate the following integral using substitution: $\int \frac{3t^2}{2t^3 + 3} dt$