

PRINT Your Name: \_\_\_\_\_

**Quiz 1 — August 29, 2012 – Section 9 – 10:10 – 11:00**

**Remove everything from your desk except this page and a pencil or pen.**

The solution will be posted soon after the quiz is given.

**Circle** your answer. **Show your work.** **Check your answer.**

The quiz is worth 5 points.

Find  $\int \frac{dx}{\sqrt{1-x^2} \arcsin x}$ .

**Answer:** Let  $u = \arcsin x$ . Then  $du = \frac{dx}{\sqrt{1-x^2}}$ . The integral is equal to

$$\int \frac{1}{u} du = \ln |u| + C = \boxed{\ln |\arcsin x| + C}.$$

**Check:** The derivative of the proposed answer is

$$\frac{1}{\sqrt{1-x^2} \arcsin x}. \checkmark$$