

**Name:**

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This quiz covers: 3.6, 4.5 and 5.1.

**Directions:** Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.1.) If  $f'(x) = 1 - 6x$  and  $f(0) = 8$ , find  $f$ .

2.) Evaluate the following integral:

$$\int_{-\pi}^{\pi} 2 \tan x \cos x \, dx$$

3.) Evaluate the following limit by interpreting it in terms of the area. Drawing a sketch may be useful.

$$\int_{-1}^2 |x| \, dx$$