

Calc 3 questions  
undertext

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# Chapter 1

## testing

### 1.1 questions

#### Oppgave

Evaluate the double integral

$$\iint_R x^2 y \, dA.$$

where  $R$  is the region bounded by  $y = x^2$  and  $y = 2x$ .

**Solution:** First, find the intersection points of  $y = x^2$  and  $y = 2x$  :

$$x^2 = 2x \implies x^2 - 2x = 0 \implies x(x - 2) = 0.$$

so  $x = 0$  and  $x = 2$ . The region  $R$  is described by  $x^2 \leq 2x$  for  $0 \leq x \leq 2$ .

set up the integral:

$$\iint_R x^2 y \, dA.$$