

## Study guide for quiz 08

Quiz problems include both the lecture contents and homework problems.

1. Practice on how to find  $A(x)$  in the formula  $\int_a^b A(x)dx$  (or  $A(y)$  in  $\int_a^b A(y)dy$ ,  $A(z)$  in  $\int_a^b A(z)dz$ , respectively). Read the examples in section 6.1 and try a few in Exercise 6.1. Also think about how to choose the best direction of slicing in these examples.
2. Study the method of disks (washers) and method of cylindrical shells for both volume of revolution around  $x$ - and  $y$ - axis.
3. Section 6.3: Study the formula of arclength for curves of the form  $\{y = f(x), a \leq x \leq b\}$ ,  $\{x = f(y), c \leq y \leq d\}$  and  $\{x = X(t), y = Y(t), \alpha \leq t \leq \beta\}$ .