

## Homework problem 2

The following statement is false in general:

$\int_a^b f(x)dx$  is the area bounded by the graph of  $f$ , the  $x$  axis, and lines  $x = a$  and  $x = b$ .

1. Provide an example of  $f$ ,  $a$ ,  $b$  for which the statement above is false.
2. For  $a$  and  $b$  fixed, for which functions is the above statement true?