

1. Let  $f(x) = 2$  and  $a = 0$ . Then  $A_f(x) = \int_0^x 2 dt$ .

(a) Find  $A_f(0)$ ,  $A_f(3)$ ,  $A_f(-3)$

(b) Find a formula for  $A_f(x)$ . How is  $A_f$  related to  $f$ ?

2. Let  $f(x) = 2x$  and  $a = 1$ .

(a) Find  $A_f(1)$ ,  $A_f(3)$ ,  $A_f(0)$

(b) Find a formula for  $A_f(x)$ . How is  $A_f$  related to  $f$ ?