

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

(a) Find  $A_f(0)$ ,  $A_f(3)$ ,  $A_f(-3)$ ,  $A_f(4)$

(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  $A_f(1)$ ,  $A_f(3)$ ,  $A_f(0)$ , and  $A_f(-1)$

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