

**Exercise 49**

For the following exercises, given each function  $f$ , evaluate  $f(-1)$ ,  $f(0)$ ,  $f(2)$ , and  $f(4)$ .

$$f(x) = \begin{cases} 7x + 3 & \text{if } x < 0 \\ 7x + 6 & \text{if } x \geq 0 \end{cases}$$

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**Solution**

Since  $-1 < 0$ ,

$$f(-1) = 7(-1) + 3 = -7 + 3 = -4.$$

Since  $0 \geq 0$ ,

$$f(0) = 7(0) + 6 = 0 + 6 = 6.$$

Since  $2 \geq 0$ ,

$$f(2) = 7(2) + 6 = 14 + 6 = 20.$$

Since  $4 \geq 0$ ,

$$f(4) = 7(4) + 6 = 28 + 6 = 34.$$