

**Exercise 64**

Find the exact value of each expression.

(a)  $\tan^{-1} \sqrt{3}$

(b)  $\arctan(-1)$

**Solution**

The inverse tangent only yields a value between  $-\pi/2$  and  $\pi/2$ .

$$\tan^{-1} \sqrt{3} = \frac{\pi}{3}$$

$\arctan x$  is another way of writing  $\tan^{-1} x$ , so

$$\arctan(-1) = -\frac{\pi}{4}.$$

