

**Exercise 39**

**Inequalities** Write each statement in terms of inequalities.

- (a)  $x$  is positive.
- (b)  $t$  is less than 4.
- (c)  $a$  is greater than or equal to  $\pi$ .
- (d)  $x$  is less than  $\frac{1}{3}$  and is greater than  $-5$ .
- (e) The distance from  $p$  to 3 is at most 5.

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**Solution**

$x$  is positive:  $x > 0$ .

$t$  is less than 4:  $t < 4$ .

$a$  is greater than or equal to  $\pi$ :  $a \geq \pi$ .

$x$  is less than  $\frac{1}{3}$  and is greater than  $-5$ :  $-5 < x < \frac{1}{3}$ .

The distance from  $p$  to 3 is at most 5:  $d(p, 3) \leq 5$  or  $|3 - p| \leq 5$  or  $-5 \leq 3 - p \leq 5$ .