SAT PREP
Graphs of Inverse Trigonometric Functions

Domain: $-1 \le x \le 1$
Range: $0 \le y \le \pi$

$y = \cos^{-1}x$

(a)

Domain: $-1 \le x \le 1$
Range: $-\frac{\pi}{2} \le y \le \frac{\pi}{2}$

$y = \sin^{-1}x$

(b)

Domain: $-\infty < x < \infty$
Range: $-\frac{\pi}{2} < y < \frac{\pi}{2}$

$y = \tan^{-1}x$

(c)

Domain: $x \le -1$ or $x \ge 1$
Range: $0 \le y \le \pi, y \ne \frac{\pi}{2}$

$y = \sec^{-1}x$

(d)

Domain: $x \le -1$ or $x \ge 1$
Range: $-\frac{\pi}{2} \le y \le \frac{\pi}{2}, y \ne 0$

$y = \csc^{-1}x$

(e)

Domain: $-\infty < x < \infty$
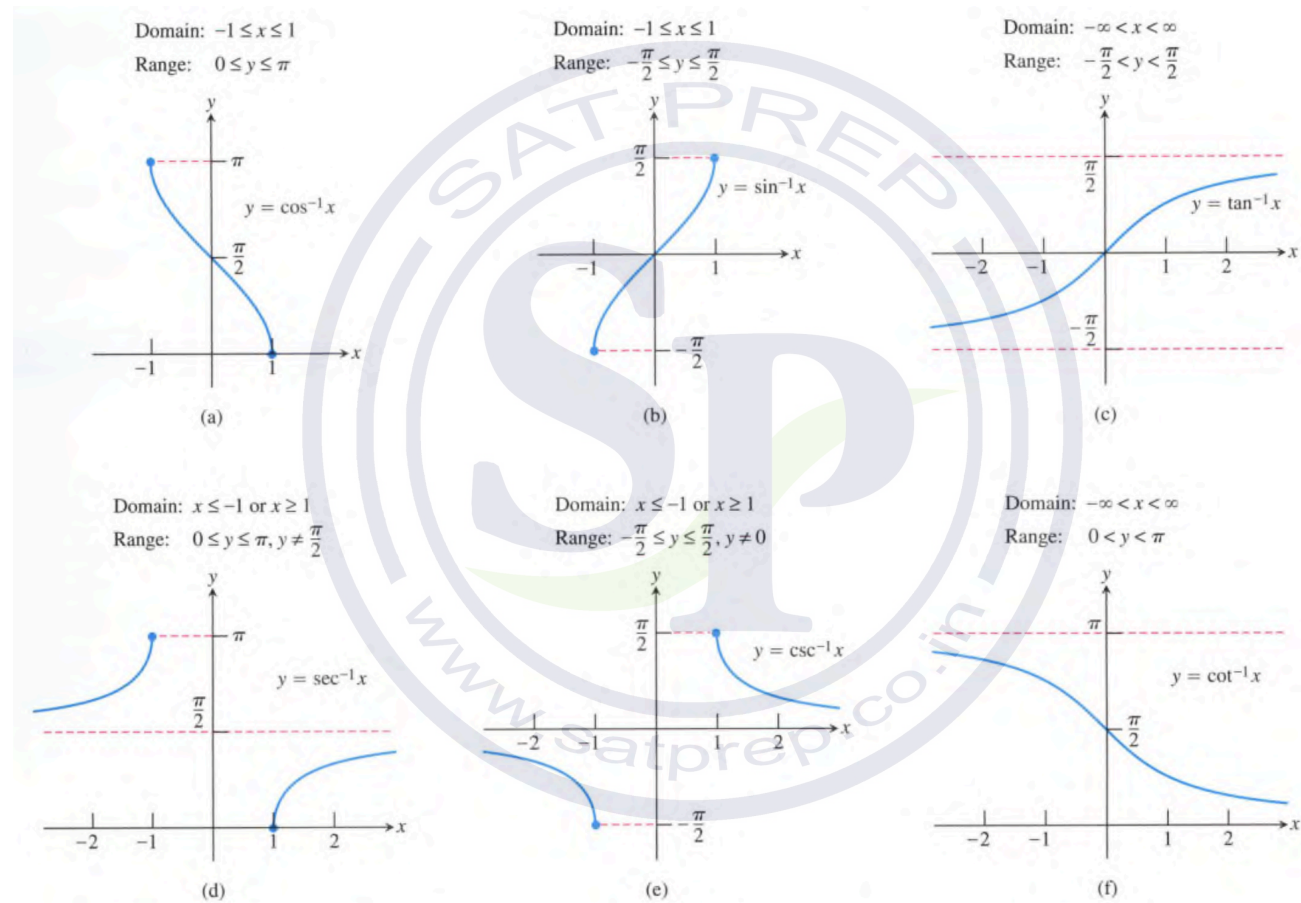Range: $0 < y < \pi$

$y = \cot^{-1}x$

(f)

Figure 1.48 Graphs of (a) $y = \cos^{-1}x$, (b) $y = \sin^{-1}x$, (c) $y = \tan^{-1}x$, (d) $y = \sec^{-1}x$, (e) $y = \csc^{-1}x$, and (f) $y = \cot^{-1}x$.