

4.19 Relations between Inverse Trigonometric Functions

$$474. \quad \arcsin(-x) = -\arcsin x$$

$$475. \quad \arcsin x = \frac{\pi}{2} - \arccos x$$

$$476. \quad \arcsin x = \arccos \sqrt{1-x^2}, \quad 0 \leq x \leq 1.$$

$$477. \quad \arcsin x = -\arccos \sqrt{1-x^2}, \quad -1 \leq x \leq 0.$$

$$478. \quad \arcsin x = \arctan \frac{x}{\sqrt{1-x^2}}, \quad x^2 < 1.$$

$$479. \quad \arcsin x = \operatorname{arccot} \frac{\sqrt{1-x^2}}{x}, \quad 0 < x \leq 1.$$

$$480. \quad \arcsin x = \operatorname{arccot} \frac{\sqrt{1-x^2}}{x} - \pi, \quad -1 \leq x < 0.$$

$$481. \quad \arccos(-x) = \pi - \arccos x$$

$$482. \arccos x = \frac{\pi}{2} - \arcsin x$$

$$483. \arccos x = \arcsin \sqrt{1-x^2}, \quad 0 \leq x \leq 1.$$

$$484. \arccos x = \pi - \arcsin \sqrt{1-x^2}, \quad -1 \leq x \leq 0.$$

$$485. \arccos x = \arctan \frac{\sqrt{1-x^2}}{x}, \quad 0 < x \leq 1.$$

$$486. \arccos x = \pi + \arctan \frac{\sqrt{1-x^2}}{x}, \quad -1 \leq x < 0.$$

$$487. \arccos x = \operatorname{arccot} \frac{x}{\sqrt{1-x^2}}, \quad -1 \leq x \leq 1.$$

$$488. \arctan(-x) = -\arctan x$$

$$489. \arctan x = \frac{\pi}{2} - \operatorname{arccot} x$$

$$490. \arctan x = \arcsin \frac{x}{\sqrt{1+x^2}}$$

$$491. \arctan x = \arccos \frac{1}{\sqrt{1+x^2}}, \quad x \geq 0.$$

$$492. \arctan x = -\arccos \frac{1}{\sqrt{1+x^2}}, \quad x \leq 0.$$

$$493. \arctan x = \frac{\pi}{2} - \arctan \frac{1}{x}, x > 0.$$

$$494. \arctan x = -\frac{\pi}{2} - \arctan \frac{1}{x}, x < 0.$$

$$495. \arctan x = \operatorname{arccot} \frac{1}{x}, x > 0.$$

$$496. \arctan x = \operatorname{arccot} \frac{1}{x} - \pi, x < 0.$$

$$497. \operatorname{arccot}(-x) = \pi - \operatorname{arccot} x$$

$$498. \operatorname{arccot} x = \frac{\pi}{2} - \arctan x$$

$$499. \operatorname{arccot} x = \arcsin \frac{1}{\sqrt{1+x^2}}, x > 0.$$

$$500. \operatorname{arccot} x = \pi - \arcsin \frac{1}{\sqrt{1+x^2}}, x < 0.$$

$$501. \operatorname{arccot} x = \arccos \frac{x}{\sqrt{1+x^2}}$$

$$502. \operatorname{arccot} x = \arctan \frac{1}{x}, x > 0.$$

$$503. \operatorname{arccot} x = \pi + \arctan \frac{1}{x}, x < 0.$$