

$$512.1. \quad \frac{d}{dx} \arcsin \frac{x}{a} = \frac{1}{\sqrt{a^2 - x^2}}.$$

$$512.2. \quad \frac{d}{dx} \arccos \frac{x}{a} = \frac{-1}{\sqrt{a^2 - x^2}}.$$

$$512.3. \quad \frac{d}{dx} \operatorname{arctg} \frac{x}{a} = \frac{a}{a^2 + x^2}.$$

$$512.4. \quad \frac{d}{dx} \operatorname{arcctg} \frac{x}{a} = \frac{-a}{a^2 + x^2}.$$

$$512.5. \quad \frac{d}{dx} \operatorname{arcsec} \frac{x}{a} = \frac{a}{x \sqrt{x^2 - a^2}} \quad \left[0 < \operatorname{arcsec} \frac{x}{a} < \frac{\pi}{2} \right].$$

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[512.6

$$512.6. \quad \frac{d}{dx} \operatorname{arcsec} \frac{x}{a} = \frac{-a}{x \sqrt{x^2 - a^2}} \quad \left[\frac{\pi}{2} < \operatorname{arcsec} \frac{x}{a} < \pi \right],$$

$$512.7. \quad \frac{d}{dx} \operatorname{arccsc} \frac{x}{a} = \frac{a}{x \sqrt{x^2 - a^2}} \quad \left[-\frac{\pi}{2} < \operatorname{arccsc} \frac{x}{a} < 0 \right].$$

$$512.8. \quad \frac{d}{dx} \operatorname{arccsc} \frac{x}{a} = \frac{-a}{x \sqrt{x^2 - a^2}} \quad \left[0 < \operatorname{arccsc} \frac{x}{a} < \frac{\pi}{2} \right].$$

($a > 0$ всюду, кроме 512.3 и 512.4.)