

The following will be given on the exam:

Unit circle with standard angles  $(0, \pi/6, \pi/4, \pi/3, \pi/2)$  and their sine/cosine values

$$d/dx(\arcsin(x)) = \frac{1}{\sqrt{1-x^2}}$$

$$d/dx(\arctan(x)) = \frac{1}{x^2+1}$$

$$d/dx(\operatorname{arcsec}(x)) = \frac{1}{|x|\sqrt{x^2-1}}$$

$$\int \sec(x)dx = \ln(|\sec(x) + \tan(x)|) + c$$

$$\text{Range of arcsin: } -\pi/2 \leq \theta \leq \pi/2$$

$$\text{Range of arccos: } 0 \leq \theta \leq \pi$$

$$\text{Range of arctan: } -\pi/2 < \theta < \pi/2$$

$$\text{Range of arccot: } 0 < \theta < \pi$$

$$\text{Range of arcsec: } 0 \leq \theta < \pi/2 \text{ union } \pi/2 < \theta \leq \pi$$

$$\text{Range of arccsc: } -\pi/2 \leq \theta < 0 \text{ union } 0 < \theta \leq \pi/2$$

$$\cos^2(\theta) = \frac{1}{2}(1 + \cos(2\theta))$$

$$\sin^2(\theta) = \frac{1}{2}(1 - \cos(2\theta))$$

$$\sin(2\theta) = 2 \sin(\theta) \cos(\theta)$$

$$\cos(2\theta) = \cos^2(\theta) - \sin^2(\theta)$$

$$\sin^2(\theta) + \cos^2(\theta) = 1$$

$$\tan^2(\theta) + 1 = \sec^2(\theta)$$