

## Trig Integration Formulas

p. 366 - 373 (5.3)

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$$1. \int (\cos(x)) dx = \sin(x) + C$$

$$2. \int (\sin(x)) dx = -\cos(x) + C$$

$$3. \int \sec^2(x) dx = \tan(x) + C$$

$$4. \int (\sec(x)\tan(x)) dx = \sec(x) + C$$

$$5. \int \csc^2(x) dx = -\cot(x) + C$$

$$6. \int (\csc(x)\cot(x)) dx = -\csc(x) + C$$

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$$1. \int (2\sin(x)) dx$$

$$2. \int (\pi \sec^2(\theta) - \csc^2(\theta)) d\theta$$

$$3. \int (3t^2 - 1)^2 dt$$

\*\*4. If the second derivative of  $f$  is given by  $f''(x) = 2x - \cos x$ ,  
which of the following could be  $f(x)$ ?

a)  $\frac{x^3}{3} + \cos x - x + 1$     b)  $\frac{x^3}{3} - \cos x - x + 1$

c)  $x^3 + \cos x - x + 1$     d)  $x^2 - \sin x + 1$     e)  $x^2 - + \sin x + 1$