

$$\int \tan^2 \theta \, d\theta$$

$$\int \sec^2 \theta - 1 \, d\theta$$

$$\tan \theta - \theta + C$$

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

$$1 + \cot^2 \theta = \csc^2 \theta$$

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

$$\frac{\sin^2 \theta}{\cos^2 \theta}$$

$$\sin^2 \theta \left( \frac{1}{\cos^2 \theta} \right)$$

$$\frac{1 - \cos^2 \theta}{\cos^2 \theta}$$

$$\frac{1}{\cos^2 \theta} - \frac{\cos^2 \theta}{\cos^2 \theta}$$

$$\begin{array}{l}
 s(t) \quad s \\
 \textcircled{v(t)} \quad \frac{ds}{dt} \\
 a(t) \quad \frac{d^2s}{dt^2}
 \end{array}$$

$$\frac{d^2s}{dt^2} = -k$$

$$\frac{ds}{dt} = -kt + c$$

$$s = -\frac{kt^2}{2} + 88t + c \leftarrow \frac{ds}{dt} = -kt + 88$$

$$0 = -kt + 88$$

$$s = -k \left( \frac{88}{k} \right)^2 \frac{1}{2} + 88 \left( \frac{88}{k} \right)$$

$$t = \frac{88}{k}$$

$$s = -\frac{1}{2} \cdot \frac{88^2}{k} + \frac{88^2}{k}$$

$$242 = -\frac{88^2}{2k} + \frac{88^2}{k}$$

$$16 = k$$