

$$\textcircled{33} \int (4x+3)^4 dx$$

$$u = 4x+3$$

$$du = 4 dx$$

$$\frac{1}{4} \int u^4 du$$

$$\frac{1}{4} du = dx$$

$$\frac{1}{4} \cdot \frac{1}{5} u^5$$

$$\frac{1}{20} (4x+3)^5 + C$$

35

$$\int \frac{1}{\sqrt{x-7}} dx$$

$$u = x-7$$

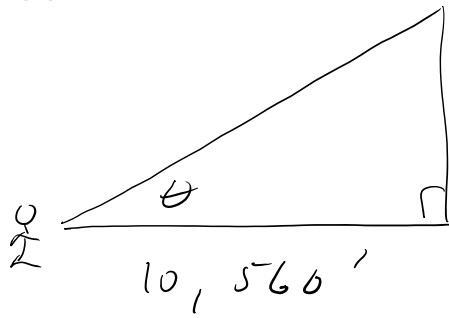
$$du = dx$$

$$\int \frac{du}{u^{1/2}}$$

$$\int u^{-1/2} du$$

$$2u^{1/2}$$

$$2\sqrt{x-7} + C$$



$$3000' = h$$

$$\theta = 0.276$$

$$\frac{d}{dt} (\tan \theta = \frac{h}{10,560})$$

$$\sec^2 \theta \cdot \frac{d\theta}{dt} = \frac{dh}{dt} \cdot \frac{1}{10,560}$$

$$1.081 \theta' = \frac{100}{10,560}$$

$$\theta' = 0.00876 \frac{\text{rad}}{\text{min}}$$