

$$T = \frac{\left(\frac{86401}{86400}\right)^2 - 1}{2(-19 \times 10^{-6})}$$

$$= 1.2 \text{ K.}$$

$$e) T = \frac{\left(\frac{86401}{86400}\right)^2 - 1}{1.2 \times 10^{-6}} = 19.3 \text{ K}$$