

*unit rate: $\frac{1 \text{ min}}{? \text{ seconds}} \rightarrow \frac{1 \text{ min}}{60 \text{ secs}}$

Solve the following (show all of your work)

6. 10 minutes = 600 seconds

$$\frac{1 \text{ min}}{60 \text{ secs}} \times 10 = \frac{10 \text{ min}}{\boxed{600 \text{ secs}}}$$

7. 10 days = 864,000 seconds

* $\frac{1 \text{ day}}{? \text{ secs}} \rightarrow \frac{1 \text{ day}}{24 \text{ hrs}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{1 \text{ min}}{60 \text{ sec}} \rightarrow \frac{1 \text{ day}}{86400}$

$$\frac{1 \text{ day}}{86400 \text{ sec}} \times 10 = \frac{10 \text{ days}}{\boxed{864000 \text{ secs}}}$$

8. 16 minutes = 0.011424 days

* $\frac{1 \text{ min}}{? \text{ days}} \rightarrow \frac{1 \text{ min}}{0.017 \text{ hrs}} \rightarrow \frac{1 \text{ hr}}{0.042 \text{ days}} \rightarrow \frac{1 \text{ min}}{0.000714}$

$$\frac{1 \text{ min}}{0.000714 \text{ days}} \times 16 = \frac{16 \text{ mins}}{\boxed{0.011424 \text{ days}}}$$

9. On your last birthday, how many seconds had you already lived?

27 years = 851,472,000 seconds

* $\frac{1 \text{ yr}}{? \text{ secs}}$

$$\frac{1 \text{ yr}}{? \text{ secs}} \rightarrow \frac{1 \text{ yr}}{365 \text{ days}} \times \frac{1 \text{ day}}{24 \text{ hrs}} \times \frac{1 \text{ hr}}{60 \text{ min}} \times \frac{1 \text{ min}}{60 \text{ secs}} \rightarrow \frac{1 \text{ yr}}{31,536,000 \text{ secs}}$$

$$\frac{1 \text{ yr}}{31,536,000 \text{ secs}} \times 27 \rightarrow \frac{27 \text{ years}}{\boxed{851,472,000 \text{ secs}}}$$