

Exercise 1.7

How many years older will you be 1.00 gigasecond from now? (Assume a 365-day year.)

Solution

$$1.00 \cancel{\text{Gs}} \times \frac{10^9 \cancel{\text{s}}}{1 \cancel{\text{Gs}}} \times \frac{1 \cancel{\text{min}}}{60 \cancel{\text{s}}} \times \frac{1 \cancel{\text{hour}}}{60 \cancel{\text{min}}} \times \frac{1 \cancel{\text{day}}}{24 \cancel{\text{hours}}} \times \frac{1 \text{ year}}{365 \cancel{\text{days}}} = \frac{(1.00)(10^9)(1)(1)(1)(1) \text{ years}}{(1)(60)(60)(24)(365)}$$
$$\approx 31.7 \text{ years}$$