$$\text{distance } = \sqrt{(\text{North position})^2 + (\text{East position})^2}$$

Parable	**Special Relativity**
North measured in miles	Time measured in seconds
East measured in feet	Distance measured in meters
Conversion $k = 5280$ feet/mile	Conversion $c = 2.99792458 \times 10^8$ m/s
$N(\text{feet}) = kN(\text{miles})$	$t(\text{m}) = ct(\text{s})$
$E(\text{miles}) = N(\text{feet})/k$	$t(\text{s}) = t(\text{m})/c$
North interval $\Delta N = N_2 - N_1$	Space interval $\Delta x = x_2 - x_1$
East interval $\Delta E = E_2 - E_1$	Time interval $\Delta t = t_2 - t_1$
$(\text{Displacement Interval})^2 = (k\Delta N)^2 + (\Delta E)^2$	$(\text{SpaceTime Interval})^2 = (c\Delta t)^2 - (\Delta x)^2$
$(\text{Displacement Interval})^2 = (\Delta N)^2 + (\Delta E)^2$	$(\text{SpaceTime Interval})^2 = (\Delta t)^2 - (\Delta x)^2$

$$(\text{SpaceTime Interval})^2 = (c\Delta t)^2 - (\Delta x)^2$$

$$(\text{SpaceTime Interval})^2 = (\Delta t)^2 - (\Delta x)^2$$

$$L \quad = \quad 4.07 \times 10^{16} \text{ meters}$$

$$\begin{aligned}
(\text{SpaceTime Interval})^2 \qquad\qquad &= \quad (\Delta t)^2 - (\Delta x)^2 \\
(\text{SpaceTime Interval})^2 + (\Delta x)^2 &= \quad (\Delta t)^2 \\
(\text{SpaceTime Interval})^2 + \quad 0 \quad &= \quad (\Delta t)^2 \\
(\text{SpaceTime Interval})^2 \qquad\qquad &= \quad (\Delta t)^2 \\
\text{SpaceTime Interval} \qquad\qquad &= \quad \Delta t
\end{aligned}$$

$$c \quad = \quad \frac{\text{1 meter of space}}{\text{1 meter of time}} \quad = \quad 1$$

$$c \quad = \quad \frac{\text{1 year of space}}{\text{1 year of time}} \quad = \quad 1$$