Thus, \( T = \frac{1}{2} A T^2 - \frac{1}{2} B T^2 = S \)

\[
T = 2\sqrt{\frac{S}{A}}
\]

An easy check of this expression is if \( |D| = 1 \Rightarrow T = \frac{25}{A} - \frac{25}{B} T = \frac{25}{A(1-B)} \)

\[
T_A = \frac{25}{A} \quad \text{and} \quad T_B = \frac{25}{B} T = \frac{25}{A(1-B)}
\]

\[
D = -6.86 - 1.8 S
\]

Here, we have

\[
S = 805 m
\]

\[
A = 1.788 m/s^2
\]

\[
T = 33.75 s
\]