8. A spacecraft is travelling at a constant speed relative to a nearby planet.

A technician on the spacecraft measures the length of the spacecraft as 275 m.

An observer on the planet measures the length of the spacecraft as 125 m.

The speed of the spacecraft relative to the observer on the nearby planet is

A $1{\cdot}54 \times 10^{4}\ \text{m s}^{-1}$

B $2{\cdot}22 \times 10^{8}\ \text{m s}^{-1}$

C $2{\cdot}67 \times 10^{8}\ \text{m s}^{-1}$

D $3{\cdot}00 \times 10^{8}\ \text{m s}^{-1}$

E $7{\cdot}14 \times 10^{16}\ \text{m s}^{-1}$.