Q3. A spaceship 50m long passes the earth at a speed of 2.8× 10^8 m/s. what will be its apparent length?

Given:- l_0= 50m ; v=2.8× 10^8m/s

Formula:- $l = l_0\sqrt{1 - \frac{v^2}{c^2}}$

Solution :- $l = 50\sqrt{1 - \left(\frac{2.8\times 10^8}{3\times 10^8}\right)^2}$ =18m

Ans:- The apparent length of the moving spaceship is 18m.