1° Honors Physics - Kinematics quiz 4 09-24-02

A truck going 11.5 m/s accelerates for 9.50 s and covers 165 m. What is its acceleration?

$a = \_\_\_\_ \frac{m}{s^2}$

$V_i = 11.5 \frac{m}{s}$

$t = 9.50 s$

$\Delta x = 165 m$

$\Delta x = V_i t + \frac{1}{2} a t^2$

$a = \frac{2(\Delta x - V_i t)}{t^2}$

$= \frac{2(165m - 11.5\frac{m}{s}(9.50s))}{(9.50s)^2}$

$\boxed{a = 1.24 \frac{m}{s^2}}$

3° Honors Physics - Kinematics quiz 4 09-24-02

A car going 14.2 m/s accelerates for 10.3 s and covers 265 m. What is its acceleration?

$a = \_\_\_\_ \frac{m}{s^2}$

$V_i = 14.2 \frac{m}{s}$

$t = 10.3 s$

$\Delta x = 265 m$

$\Delta x = V_i t + \frac{1}{2} a t^2$

$a = \frac{2(\Delta x - V_i t)}{t^2}$

$= \frac{2(265m - 14.2\frac{m}{s}(10.3s))}{(10.3s)^2}$

$\boxed{a = 2.24 \frac{m}{s^2}}$

8° Honors Physics - Kinematics quiz 4 09-24-02

A bus going 7.25 m/s accelerates for 6.50 s and covers 185 m. What is its acceleration?

$a = \_\_\_\_ \frac{m}{s^2}$

$V_i = 7.25 \frac{m}{s}$

$t = 6.50 s$

$\Delta x = 185 m$

$\Delta x = V_i t + \frac{1}{2} a t^2$

$a = \frac{2(\Delta x - V_i t)}{t^2}$

$= \frac{2(185m - 7.25\frac{m}{s}(6.50s))}{(6.50s)^2}$

$\boxed{a = 6.53 \frac{m}{s^2}}$