

A vendor bought 225 grapes at \$35 each and sold them at \$45 each. What was his gain percent?

Question:

- A. 28.57%
- B. 22.22%
- C. 27.58%
- D. 20.22%

Answer:

(buying) 225 grapes at \$35 each

$$\begin{aligned} \text{Cost of all grapes} &= 225 \times 35 \\ &= \$7875 \end{aligned}$$

$$\begin{array}{r} 225 \\ \times 35 \\ \hline 1125 \\ + 6750 \\ \hline 7875 \end{array}$$

(Selling) 225 grapes at \$45 each

$$\begin{aligned} \text{selling price of all} &= 225 \times 45 \\ &= \$10125 \end{aligned}$$

$$\begin{array}{r} 225 \\ \times 45 \\ \hline 1125 \\ + 9000 \\ \hline 10125 \end{array}$$

$$\begin{aligned} \text{profit} &= \text{S.P.} - \text{C.P.} \\ &= 10125 - 7875 \\ &= \$ 2250 \end{aligned}$$

$$\begin{aligned} \text{profit \%} &= \frac{2250}{7875} \times 100 \\ &= \frac{450}{1575} \times 100 \\ &= \frac{90 \times 100}{315} \\ &= \frac{18 \times 100}{63} \\ &= \frac{2 \times 100}{7} = \frac{200}{7} \end{aligned}$$

$$\begin{array}{r} 28.57 \\ 7 \overline{)200} \\ \underline{-14} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-35} \\ 50 \end{array}$$

$$\text{gain \%} = 28.57\%$$

\therefore Ans : Option (A)