

carrot types: $\left[\{ \text{kg: } 5, \text{ price: } 100 \}, \{ \text{kg: } 7, \text{ price: } 150 \}, \{ \text{kg: } 3, \text{ price: } 70 \} \right]$

* Our objective is to fill the knapsack with items to get maximum benefit crossing the capacity.

Item	kg	Price	Density
Item(1)	5	100	20
Item(2)	7	150	21.42
Item(3)	3	70	23.3

} If we sort on density, order becomes Item(3), Item(2), Item(1)

Capacity = 36

* If we take Item(3), we can get max benefit. Because, Item(3) has max density and min kg.

Item(3) \rightarrow kg: 3, price: 70, density: 23.3

$$\begin{aligned} \text{Max Value} &= \left(\text{Capacity} / \text{Item}_{(3)} \text{ kg} \right) \cdot \text{price} \\ &= (36 / 3) \cdot 70 \end{aligned}$$

$$\text{Max Value} = 12 \cdot 70$$

$$\text{Max Value} = 840$$