

Q1 Elevations of the normal ground with respect to a proposed highway are as following:
(Assume width of the road= 6m & Shrinkage factor is 0.9)

Distance along centerline (m)	0	100	200	300	400	500	600	700	Total volume
Elevation(m)	0	-6	0	10	0	-4	3	0	
Fill CCM									
Fill BCM									
Cut BCM									
Cumulative Volume (BCM)									

Find the following:

- 1-Draw the highway profile and mass diagram.
- 2-The total volume of a cut , fill , waste or borrow.
- 3- The average length of haul in the balance sections