

CE 4420 Introduction to Hydrology

Assignment 11

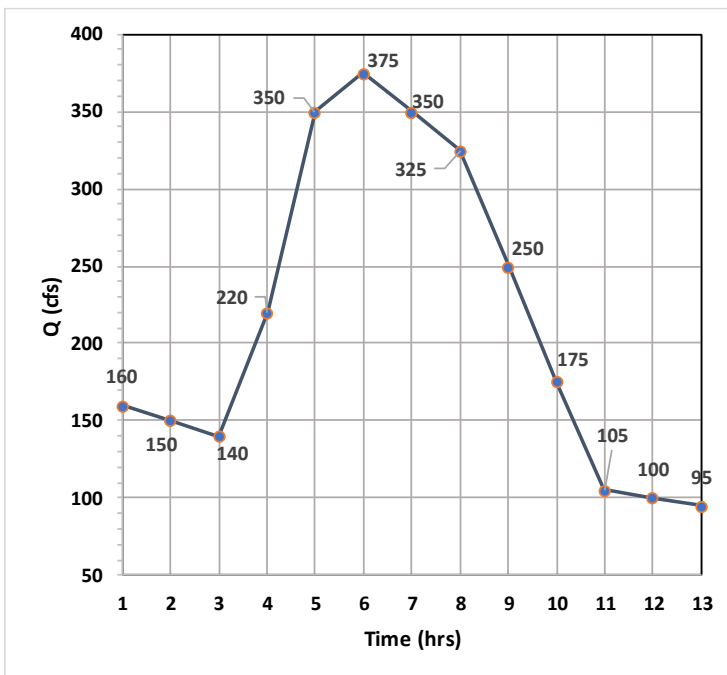
Name: _____

For the following hydrograph, surface runoff begins at $t = 3$ hr.

Time (hrs)	1	2	3	4	5	6	7	8	9	10	11	12	13
Q (cfs)	160	150	140	220	350	375	350	325	250	175	105	100	95

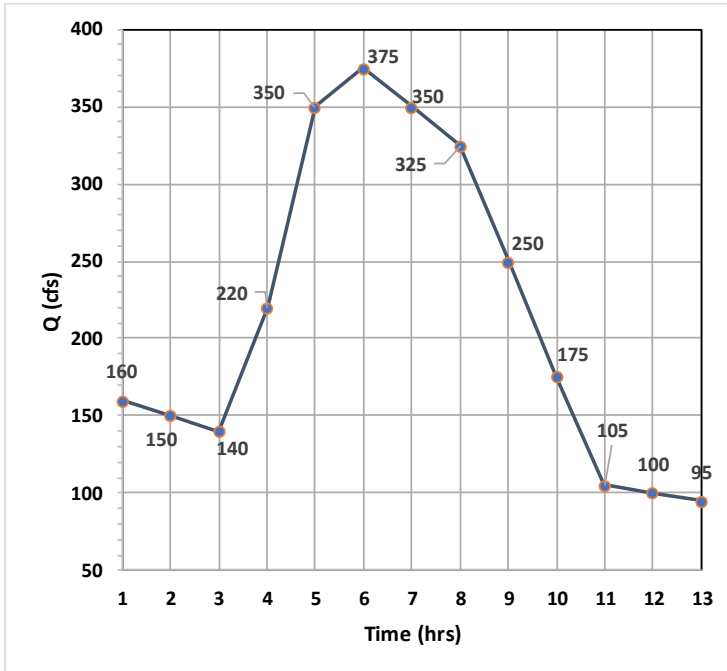
Compute the baseflow and direct runoff at $t = 3, 5, 7, 9$ and 11 hrs. using the following techniques.

(1) Straight line method (assume direct runoff ends at $t = 11$ hr.)



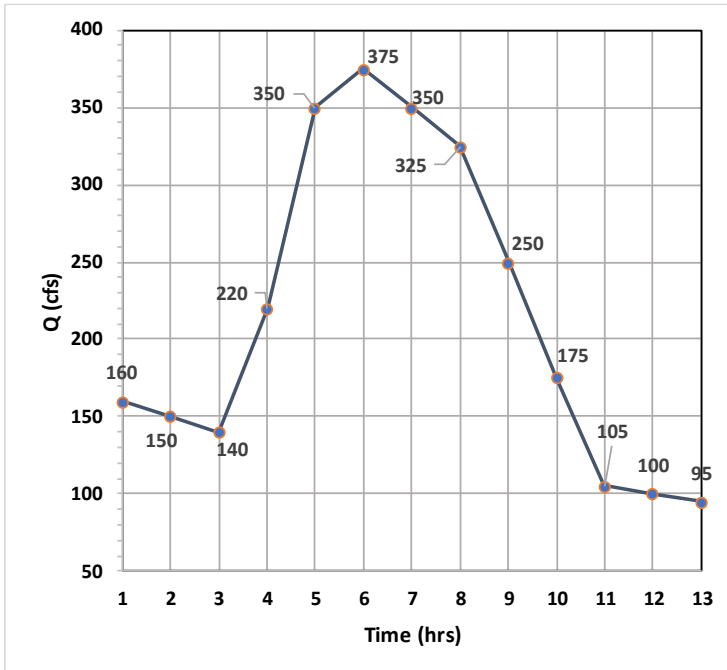
Time (hr)	3	5	7	9	11
Baseflow (cfs)					
DRH (cfs)					

(2) Fixed base method (assume $N = 4$ hrs. and direct runoff begins at $t = 3$ hr)



Time (hr)	3	5	7	9	11
Baseflow (cfs)					
DRH (cfs)					

(3) Variable slope method. Assume the inflection point occurs at $t = 8$ hr and direct runoff ends at $t = 11$ hr.



Time (hr)	3	5	7	9	11
Baseflow (cfs)					
DRH (cfs)					