CE 3354 Engineering Hydrology
Exam 1

1. For a watershed with a size of $120 km^2$, the following data on precipitation P, evaporation E and runoff Q are recorded in watershed mm. Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec P 250 205 165 50 5 0 0 5 10 55 65 190 E 5 25 30 50 80 100 150 70 60 20 10 5 Q 150 110 80 5 0 0 0 0 0 10 15 120

Table 1: Monthly Precipitation (P), Evapotranspiration (E), and Runoff (Q)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
P (mm)	250	205	165	50	5	0	0	5	10	55	65	190
E (mm)	5	25	30	50	80	100	150	70	60	20	10	5
Q (mm)	150	110	80	5	0	0	0	0	0	10	15	120

   a. At the end of which month is the amount of water stored in the basin largest and when is the smallest amount of water present in the catchment? What is the difference (m3) in the amount of water stored in the basin between these two extremes? b. In what climate (arid, humid temperate or humid tropical) do you expect this catchment to be located?

2. problem

3. problem

4. problem