exercise (see the ex-ch2, 3 provided in course webpage)
goal: apply idea under abstract proof of theorems in book/lecture to application/problems

2.4: 11, 12, 19 (for definition on supremum)
3.1: 6, 8, 18 (for formal computation of limit)
3.2: 5, 6, 11, 19 (for formal computation of limit)
3.3: 1, 2, 3 (for monotone seqences)
3.4: 1, 4 (for proof of divergence)
3.5: 3 (for cauchy and proof of divergence)
hw2: 4, 10 (for supremum and limit)