

u)

		Action	
		Retrieved	Not retrieved
Doc	R	6	2
	N	14	unknown

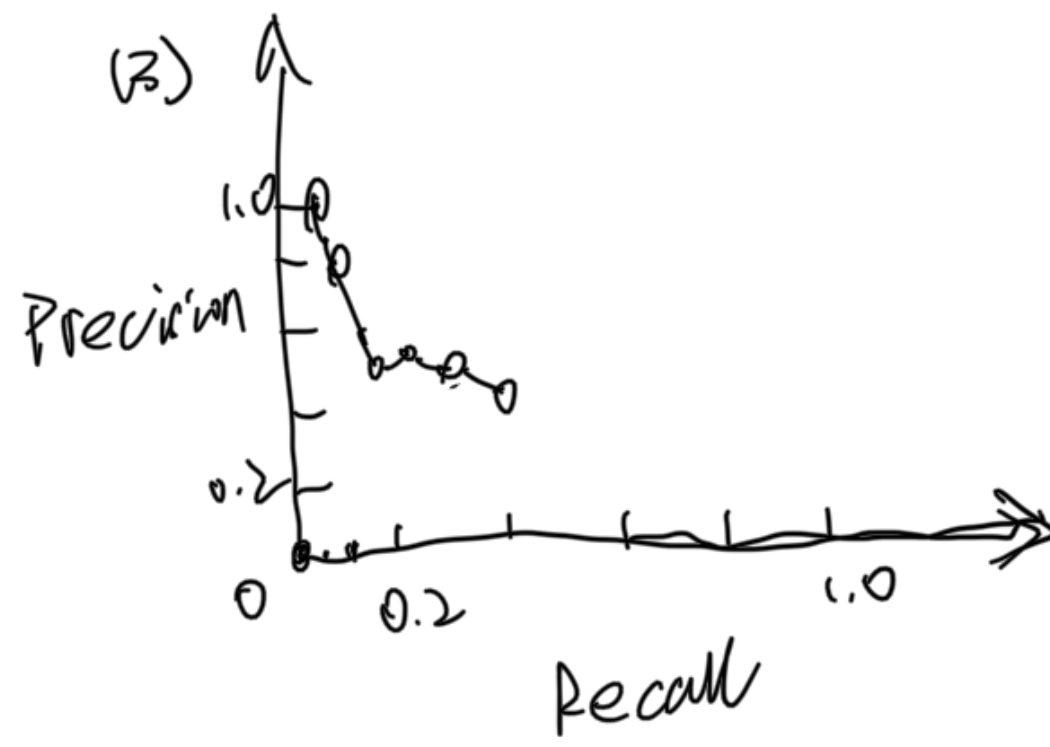
therefore, Precision =  $\frac{6}{6+14} = \frac{6}{20} = 0.3$   
 and recall =  $\frac{6}{6+2} = \frac{3}{4} = 0.75$ .

then, it yields  $F_1 = 2 \times \frac{0.3 \times 0.75}{0.3 + 0.75} \approx 0.43$

(2)

K	P	R
1	1/1	1/20
2	2/2	2/20
9	3/9	3/20
11	4/11	4/20
15	5/15	5/20
20	6/20	6/20

AP =  $\frac{1+1+\frac{1}{3}+\frac{4}{11}+\frac{1}{3}}{8}$   
 $\approx 0.67$



(4)