

Part-B

Problem 1

n>0?	n	digit=n%10	sum=sum+digit	n=n/10	iteration=iteration+1	output(sum)	output(iteration)
true	2839	2839%10=9	0+9=9	2839/10=283	0+1=1	-	-
true	283	283%10=3	9+3=12	283/10=28	1+1=2	-	-
true	28	28%10=8	12+8=20	28/10=2	2+1=3	-	-
true	2	2%10=2	20+2=22	2/10=0	3+1=4	-	-
false	-	-	-	-	-	22	4

Problem 2

n>0?	n	digit=n%10	sum=sum+digit	n=n/10	iteration=iteration+1	output(iteration)	output(sum)
true	2839	2839%10=9	0+9=9	2839/10=283	0+1=1	1	-
true	283	283%10=3	9+3=12	283/10=28	1+1=2	2	-
true	28	28%10=8	12+8=20	28/10=2	2+1=3	3	-
true	2	2%10=2	20+2=22	2/10=0	3+1=4	4	-
true	0	0%10=0	22+0=22	0/10=0	4+1	5	-

Therefore, The loop will continue as $n \geq 0$ will never be false.