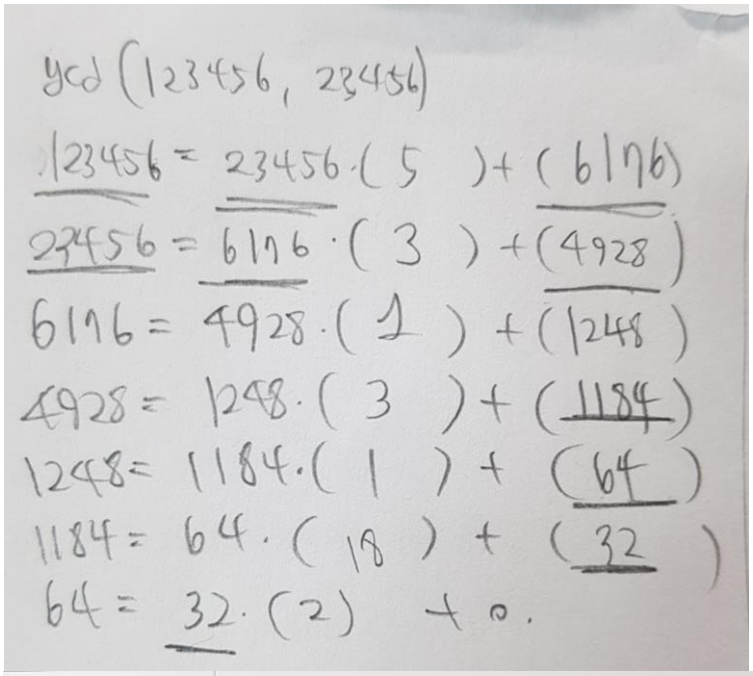
1-(a)



Q1. $\gcd(a,b) = \gcd(b, r_1) = \gcd(r_1, r_2) \cdots$

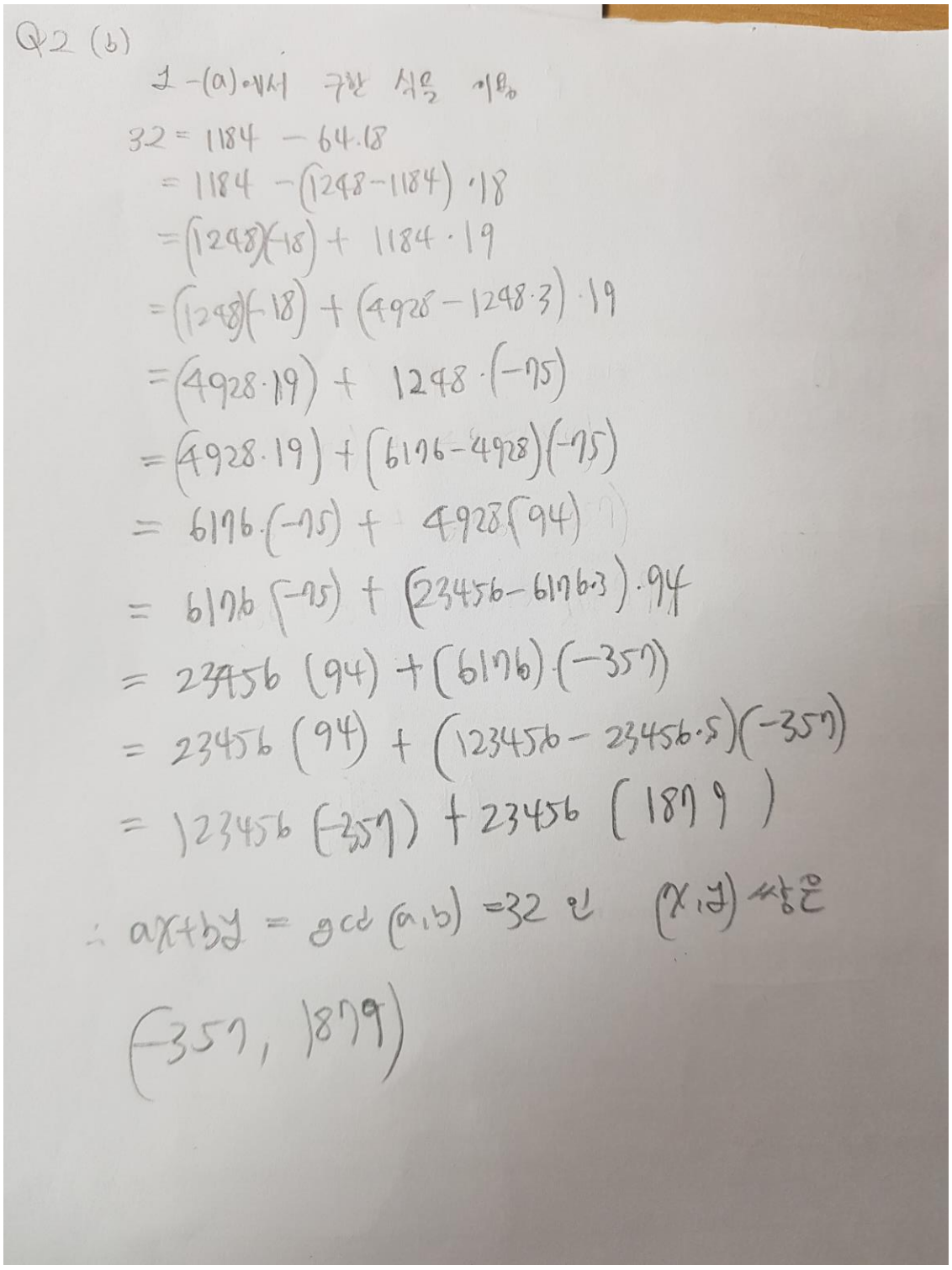
$= \gcd(r_{n+1}, r_n) = r_{n+1}$.

($r_n = 0$)

$r_{n+1} = 32$ 이므로

$\gcd(a,b) = 32$

1-(b)


Q2 (b)
1-(a)에서 구한 식을 이용
32 = 1184 − 64·18
= 1184 − (1248−1184)·18
= (1248)(−18) + 1184·19
= (1248)(−18) + (4928 − 1248·3)·19
= (4928·19) + 1248·(−75)
= (4928·19) + (6176−4928)(−75)
= 6176·(−75) + 4928(94)
= 6176(−75) + (23456−6176·3)·94
= 23456(94) + (6176)(−357)
= 23456(94) + (123456 − 23456·5)(−357)
= 123456(−357) + 23456(1879)
∴ ax+by = gcd(a,b) = 32 인 (x,y) 쌍은
(−357, 1879)