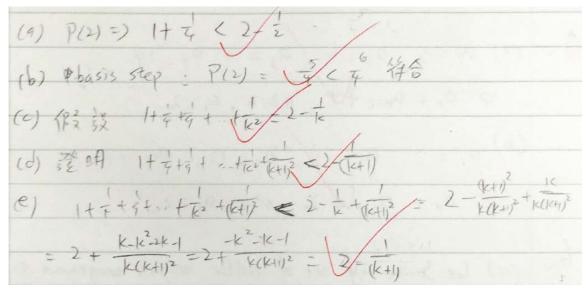
第1題.



第2題.

Explose
$$P(n) = 3^{n} \times n!$$
, $n > 6$

Suppose $P(k) = 3^{n} \times n!$ = $3^{n} \times n!$

第3題.

第4題.

(a)
$$f(0) = 1$$
 $f(2) = f(1) f(3)$ $f(4) = f(3) f(2)$
 $f(1) = 1$ $f(3) = f(2) f(3)$
(b) $f(2) = f(3)^{2} + f(3)^{3}$ $f(3) = f(2)^{3} + f(3)^{3}$ $f(4) = f(3)^{2} + f(3)^{3}$
 $= 2$ $= 5$ $= 33$
(c) $f(2) = f(3) = 1$ $f(3) = f(4) = f(3)$
 $f(4) = f(3) = 1$

第5題.

(a)
$$a_1 = 2$$
, $a_2 = 6$, $a_3 = 10$, $a_4 = 14$

=7 $a_n = a_{n-1} + 4$, $n \ge 2$, $a_1 = 2$.

(b) $a_1 = 2$ $a_2 = 6$, $a_3 = 12$, $a_4 = 20$
 $a_1 = 2$ $a_{n-1} + 2n$, $n \ge 2$, $a_1 = 2$.

第6題.

find mod (n, m)

basis step

if n=1, return M;

recursive step

ans = h.find mod (n+, m) mod m;