♯ f and g are differentiable functions of two variables. ♯

M	N	$f(M,N)$	$D_1f(M,N)$	$D_2f(M,N)$	$g(M,N)$	$D_1g(M,N)$	$D_2g(M,N)$
-1	-2	6	4	0	3	8	1
-1	2	2	-2	1	-5	7	6
1	-1	-2	-5	4	-2	9	4
1	2	5	-7	6	-1	-2	7
2	1	0	-1	-2	-3	7	4

♭ h and k are differentiable functions of one variable. ♭

V	$h(V)$	$h'(V)$	$k(V)$	$k'(V)$
-2	5	2	3	5
0	0	2	-2	7
1	1	3	2	-1
2	-1	4	4	-2

-19
-2
♢ ♠
-34
-27
♣
5
5
♡
-4
-1
-6,000,001
28
5,004,021

♣ If $S(t) = h(k(t))$, compute $S(1)$ and $S'(1)$.

♢ If $W(t) = f(h(t), k(t))$, compute $W(1)$ and $W'(1)$.

♡ If $Q(x,y) = f(h(x), g(x,y))$, compute $Q(1,2)$ and $\dfrac{\partial Q}{\partial x}(1,2)$ and $\dfrac{\partial Q}{\partial y}(1,2)$.

♠ If $C(t) = h(f(t, 2-3t))$, compute $C(1)$ and $C'(1)$.