

‡ 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

♣ 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 $\frac{\partial Q}{\partial x}(1, 2)$ and $\frac{\partial Q}{\partial y}(1, 2)$.

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

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

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-1	2	2	-2	1	-5	7	6
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