## $\begin{array}{c} \text{Math 324 B - Winter 2017} \\ \text{Midterm exam 1 answer key} \end{array}$

1. (a) 
$$\nabla f(1,-1,0) = \langle -2,2,1 \rangle$$
. (b)  $D_{\hat{j}}f(3,2,-1) = -2$ .

- $2. \ 4/15$
- 3. (a) False. (b) False. (c) True. (d) False.
- 4. (a) 5.