Section 14.6 Worksheet:

a. What is the relationship between gradient vectors and the level curves?

b. What is the relationship between gradient vectors and directional derivatives?

c. Describe the physical sense of gradient vectors in relation to the temperature distribution in our classroom.

d. Why should we not be surprised that the directional derivative in any direction $\mathbf{u} = \langle a, b \rangle$ is just a linear combination of f_x and f_y?