

# Classroom Voting Questions: Multivariable Calculus

## 14.2 Computing Partial Derivatives Algebraically

1. Which of the following functions satisfy Euler's Equation,  $xf_x + yf_y = f$ ?

(a)  $f = x^2y^3$

(b)  $f = x + y + 1$

(c)  $f = x^2 + y^2$

(d)  $f = x^{0.4}y^{0.6}$

2. If  $\frac{\partial f}{\partial x} = \frac{\partial f}{\partial y}$  everywhere, then  $f(x, y)$  is constant.

(a) True, and I am very confident

(b) True, but I am not very confident

(c) False, but I am not very confident

(d) False, and I am very confident

3. There exists a function  $f(x, y)$  with  $f_x = 2y$  and  $f_y = 2x$ .

(a) True, and I am very confident

(b) True, but I am not very confident

(c) False, but I am not very confident

(d) False, and I am very confident