

8.2 EXERCISES

In Exercises 1–22, find the first partial derivatives of the function.

1. $f(x, y) = 2x + 3y + 5$

2. $f(x, y) = 2xy$

3. $g(x, y) = 2x^2 + 4y + 1$

4. $f(x, y) = 1 + x^2 + y^2$

5. $f(x, y) = \frac{2y}{x^2}$

6. $f(x, y) = \frac{x}{1 + y}$

7. $g(u, v) = \frac{u - v}{u + v}$

9. $f(s, t) = (s^2 - st + t^2)^3$

11. $f(x, y) = (x^2 + y^2)^{2/3}$

13. $f(x, y) = e^{xy+1}$

8. $f(x, y) = \frac{x^2 - y^2}{x^2 + y^2}$

10. $g(s, t) = s^2t + st^{-3}$

12. $f(x, y) = x\sqrt{1 + y^2}$

14. $f(x, y) = (e^x + e^y)^5$