Compute the indicated partial derivatives:

1. \( f(x, y) = 3x^2y + 2xy^3 - 4x + 5y - 7 \)

(a) (2 pts) \( \frac{\partial f}{\partial x} = 6xy + 2y^3 - 4 \)

(b) (2 pts) \( \frac{\partial f}{\partial y} = 3x^2 + 6xy^2 + 5 \)

2. \( z = \frac{u^2 + 4v^3}{2u + 3w} \)

(a) (2 pts) \( z_u = \frac{2u(2u + 3w) - 2(u^2 + 4v^3)}{(2u + 3w)^2} = \frac{2u^2 + 6uw - 8v^3}{(2u + 3w)^2} \)

(b) (2 pts) \( z_v = \frac{12v^2(2u + 3w) - 0}{(2u + 3w)^\frac{3}{2}} = \frac{12v^2}{2u + 3w} \)

(c) (2 pts) \( z_w = \frac{0 - 3(u^2 + 4v^3)}{(2u + 3w)^2} = -\frac{3(u^2 + 4v^3)}{(2u + 3w)^2} \)