Warm-up #2: Simplifying Rational Expressions

$$1. \quad \frac{xy}{x^2y^3} \cdot \frac{x^3y^2z}{x}$$

$$2. \ \frac{2x+y}{4x^2-y^2}$$

$$3. \quad \frac{x^4 + 2x^2 + 1}{\frac{x^2 + 1}{x}}$$

4.
$$x - \frac{y}{x}$$