

Simplify the rational expression.

1.) $\frac{x^2 + 5x + 6}{x^2 - 2x - 15}$

2.) $\frac{x^2 - 12x + 27}{81 - x^2}$

3.) $\frac{y - x}{x^2 - y^2}$

4.) Simplify: $\frac{-3x^2 - 5x + 2}{x^3 + 2x^2}$

5.) Simplify: $\frac{x^3 + 7x^2 - 9x - 63}{x^2 + 4x - 21}$

6.) Which expression is in simplest form?

(a) $\frac{x}{x^2}$

(b) $\frac{9}{x^2 + 9}$

(c) $\frac{x^2 - 4}{x + 2}$

(d) $\frac{x^2 - 6x + 9}{x^2 - x - 6}$