

Simplifying Rational Expressions

1) $\frac{21x^2y}{7xy^5}$

$$\boxed{\frac{3x}{y^4}}$$

2) $\frac{5x-15}{5x}$

~~$\frac{5x-15}{5x}$~~

No!

$$\frac{5x-15}{5} \quad \frac{5}{5}$$
$$\frac{\cancel{5}(x-3)}{\cancel{5}x}$$

$$\boxed{\frac{x-3}{x}}$$

3) $\frac{a^7 - a^5}{a^3 - a^2}$

$$\frac{a^7}{a^5} - \frac{a^5}{a^5}$$

$$a^5(a^2 - 1)$$

$$\frac{a^3}{a^2} - \frac{a^2}{a^2}$$

$$a^2(a-1)$$

4) $\frac{a^5(a^2-1)}{a^2(a-1)} \rightarrow \frac{(a+1)(a-1)}{(a-1)}$

$$\frac{a^3(a+1)\cancel{(a-1)}}{\cancel{(a-1)}}$$

$$\boxed{a^3(a+1)}$$

Factor top
and
bottom



Cancel
matching
terms