

Simplify each of the following and state restrictions on the variables:

**Example 1:**

$$-\frac{6rst}{3rs} = -2t$$

$$r \neq 0, s \neq 0$$

**Example 2:**

$$-\frac{21x^2y^4z}{3x^4y^2} = -\frac{7y^2z}{x^2}$$

$$x \neq 0, y \neq 0$$

1.  $\frac{x^5}{x^{10}}$

11.  $\frac{18st^3}{54s^2t}$

21.  $\frac{-42st^2}{56s^3t}$

2.  $\frac{2xy}{8x^4y^3}$

12.  $\frac{45x^2y^2}{-72xy^3}$

22.  $\frac{-52xy^2}{32xy}$

3.  $\frac{-2m^3n}{6m^2n^7}$

13.  $\frac{-85m^6n^2}{-34mn^5}$

23.  $\frac{xy^2}{x^2}$

4.  $\frac{3}{6x}$

14.  $\frac{39x^3y}{65xy}$

24.  $\frac{mx}{x^2}$

5.  $\frac{4p}{2p^2}$

15.  $\frac{9x^3y}{15x}$

25.  $\frac{mx}{m}$

6.  $\frac{-25mn^2}{5mn}$

16.  $\frac{32ab^3}{10b^2}$

26.  $\frac{rst}{rstu}$

7.  $\frac{24x}{10}$

17.  $\frac{28x^2}{10x}$

27.  $\frac{25x^4}{5x^2}$

8.  $\frac{15x^2y}{6xy^2}$

18.  $\frac{5ab}{8b^2}$

28.  $\frac{21y^4}{7y^3}$

9.  $\frac{24m^2n}{15mn^2}$

19.  $\frac{-21b^2}{10ab}$

29.  $\frac{w^3a^2b^3}{a^4bw^2}$

10.  $\frac{-25a^2b^3c}{40a^3bc^2}$

20.  $\frac{35st}{-24s^2t^3}$

30.  $\frac{18p^5q^2}{81q^2p^5}$