

# Sec 7-2 : Part 3

Name \_\_\_\_\_

**Practice** Simplify. Assume that no denominator is equal to zero.

14.  $a^0 b^{-2} c^{-1}$

15.  $\frac{a^0}{a^{-2}}$

16.  $\frac{5n^5}{n^8}$

17.  $\frac{m^2}{m^{-4}}$

18.  $\frac{b^5 d^2}{b^3 d^8}$

19.  $\frac{10m^4}{30m}$

20.  $\frac{(-y)^5 m^8}{y^3 m^{-1}}$

21.  $\frac{b^6 c^5}{b^{14} c^2}$

22.  $\frac{22a^2 b^5 c^7}{-11abc^2}$

23.  $\frac{(a^{-2} b^3)^2}{(a^2 b)^{-2}}$

24.  $\frac{7x^3 z^5}{4z^{15}}$

25.  $\frac{(-r)^5 s^8}{r^3 s^2}$

26.  $\frac{(r^{-4} k^2)^2}{(5k^2)^2}$

27.  $\frac{16b^4}{-4bc^3}$

28.  $\frac{27a^4 b^6 c^9}{15a^3 c^{15}}$

29.  $\frac{(4a^{-1})^{-2}}{(2a^4)^2}$

30.  $\left(\frac{3m^2 n^2}{6m^{-1} k}\right)^0$

31.  $\frac{r^{-5} s^{-2}}{(r^2 s^5)^{-1}}$

32.  $\left(\frac{7m^{-1} n^3}{n^2 r^{-1}}\right)^{-1}$

33.  $\frac{(-b^{-1} c)^0}{4a^{-1} c^2}$

34.  $\left(\frac{3xy^{-2} z}{4x^{-2} y}\right)^{-2}$

1.  $\left(\frac{10x^{-6} z^2}{2x^3 y^{-3}}\right)^3$

2.  $\left(\frac{-3a^{-3} b^6 c}{6a^5 b^{-2} c^{-2}}\right)^2$

3.  $\left(\frac{7a^{-12} b^2 c^0}{7a^5 b^3 c}\right)^0$

4.  $\left(\frac{15x^{19} y^{-5} z^{-5}}{15(x^{-2} y)^{-8} yz}\right)^6$

5.  $\left(\frac{-u^{-5} v w^{12}}{2u^2 v^{-8} w^{13}}\right)^{-1}$

6.  $\left(\frac{4m^3 n^{-8} (np)^{-1}}{-8mn(m^4 np)^7}\right)^{-4}$

7.  $\left(\frac{13f^{-4} g^9 h^{-1}}{-13(fg)^{-2} h^5}\right)^3 \cdot \left(\frac{25f^2 g^{-8} h^4}{5fg^{11} (fh^2)^{-6}}\right)^{-2}$

8.  $\left(\frac{-3u^3 v^{-8} w^2 (u^{-1} w^3)^{-2}}{-9(uw^5)^4 v^{-8} w}\right)^0 \cdot \left(\frac{9uvw^6 (u^{-7})^2}{174u^{10} v^{12} w^{-4}}\right)^0$

9.  $\left(\frac{12m^{-5} (n^5 p)^{-4} q^7}{144(m^{-3} n^2)^{-2} pq^7}\right)^2 \cdot \left(\frac{5mn^6 p^{-5} (n^3 q^{10})^{-4}}{60m^{-3} n^7}\right)^{-2}$

10.  $\left(\frac{-10xy^{13} (x^{-5} z^4)^2}{10x^7 (x^{13} y)^5 z^{-8}}\right)^{-1} \cdot \left(\frac{9x^{-4} y (x^6 z^{-7})^{-1}}{27y^5 (x^5 yz^{-2})^{-8}}\right)^2$