

39/41

3 $\frac{7x^{-3}}{7x^{-3}} = \frac{7}{x^0}$ +2
6 $(-\frac{1}{8})^{-2} = \frac{(-1)^{-2}}{(8)^{-2}} = \frac{1 \cdot 8^2}{(-1)^2} = \frac{64}{1} = 64$ 3.2 9/24/13

9 $\frac{1}{p^{-3}} = \frac{p^3}{1} = p^3$
12 $\frac{r^{-5}}{s^{-2}} = \frac{s^2}{r^5}$
15 $\frac{x^{-3}}{x} = \frac{1}{x}$

18 $4^{-2} - 4^{-3} = \frac{1}{4^2} - \frac{1}{4^3} = \frac{1 \cdot 4}{16 \cdot 4} - \frac{1}{64} = \frac{4-1}{64} = \frac{3}{64}$ +2

21 $\frac{-1}{p^{-4}} = -p^4$
24 $5^0 + (-5)^0$ Base is 5
1-1=0
1+1=2 group
27 $\frac{p^2}{p^{-1}}$

30 $\frac{(x^2)^8 x}{x^9} = \frac{x^{16} x}{x^9} = x^{17} x^{-9} = x^8$ +2
33 $(x^5 y^3)^{-3} = x^{-15} y^{-9} = \frac{1}{x^{15} y^9}$

36 $\frac{(y^4)^2}{y^{12}} = \frac{y^8}{y^{12-8}} = \frac{1}{y^4}$ +2
39 $\frac{8k^4}{2k} = 4k^3$

42 $\frac{15a^4}{-15a^5} = \frac{-1}{a}$ +2
45 $\frac{6x^2 y^3 z^3}{-7x^2 y^5 z^5} = \frac{6}{-7y^2 z^2} = \frac{-6}{7y^2 z^2}$

48 $(5x^3 y^{-2})^2 = 5^2 x^{12} y^{-4} = \frac{25x^{12}}{y^4}$
51 $(\frac{x^{-2} y^4 z^0}{x^3 y^7})^2 = \frac{x^{-4} y^8}{x^6 y^{14}} = \frac{y^8}{x^4 x^6 y^{14-8}} = \frac{1}{x^{10} y^6}$

54 $\frac{5^{-1} z^7}{5^{-2} z^9} = \frac{5^2 z^7}{5^1 z^9} = \frac{25z^7}{5z^2} = \frac{5}{z^2}$ +2
57 $\frac{7ab^{-4}}{7^1 a^{-3} b^2} = \frac{7a^7 a^3}{b^4 b^2} = \frac{49a^4}{b^6}$

60 $\frac{15r^6 s}{5r^{-4} s^{-3}} = \frac{-15r^4 s^3}{5r^6 s} = \frac{-3s^2}{r^2}$ +2
63 $(5^2)(8)(2^0) = 25(8)(1) = 200(1) = 200$ +1
66 $(rs)^{-3} = \frac{1}{(r^3 s^3)^3} = \frac{1}{r^9 s^9}$ +6
forget to distribute
 $\frac{1}{r^9 s^9}$

$$(69) \frac{(a^4 b^{-7})^{-5}}{(5a^2 b^{-1})^{-2}} = \frac{a^{-20} b^{35}}{5^{-2} a^{-4} b^2} = \frac{5^2 a^4 b^{35}}{a^{20} b^2} = \frac{25 b^3}{a^{16}}$$