#5 Dividing w/ Negatives

① $\frac{2^2}{2^{-3}} = 2^2 2^3 = 2^5$

② $\frac{m}{m^{-4}} = m(m^4) = m^5$

③ $\frac{p^{-8}}{p^3} = \frac{1}{p^3 p^8} = \frac{1}{p^{11}}$

④ $\frac{b^{-4}}{b^{-5}} = \frac{b^5}{b^4} = b$

⑤ $\frac{(-x^{-1}y)^0}{4w^{-1}y^2} = \frac{1w}{4y^2} = \frac{w}{4y^2}$

⑥ $\frac{(a^2b^3)^2}{(ab)^{-2}} = \frac{a^4b^6}{a^{-2}b^{-2}} = a^4a^2b^6b^2 = a^6b^8$

⑦ $\frac{x^4y^0}{x^{-2}} = x^4x^2 = x^6$

⑧ $\frac{(6a^{-1}b)^2}{(b^2)^4} = \frac{36a^{-2}b^2}{b^8} = \frac{36b^2}{a^2b^8} = \frac{36}{a^2b^6}$

⑨ $\frac{(3st)^2u^{-4}}{s^{-1}t^2u^7} = \frac{9s^2t^2s^1}{u^4t^2u^7} = \frac{9s^3}{u^{11}}$

⑩ $\frac{s^{-3}t^{-5}}{(s^2t^3)^{-1}} = \frac{s^{-3}t^{-5}}{s^{-2}t^{-3}} = \frac{s^2t^3}{s^3t^5} = \frac{1}{st^2}$

(11) $\left(\frac{4m^2n^2}{8m^{-1}l}\right)^0 = 1$

(12) $\frac{(-2mn^2)^{-3}}{4m^{-6}n^4} = \frac{(-2)^{-3}m^{-3}n^{-6}}{4m^{-6}n^4} = \frac{m^6}{(-2)^3 4\, m^3 n^6 n^4} =$

$\frac{m^6}{-32m^3n^{10}} = \frac{m^3}{-32n^{10}}$

#6 mult./Div. w/ Negatives

① $\frac{8^8}{8^4} = 8^4$

② $\frac{a^4b^6}{ab^3} = a^3b^3$

③ $\frac{xy^2}{xy} = y$

④ $\frac{m^5np}{m^4p} = mn$

⑤ $\frac{5c^2d^3}{-4c^2d} = \frac{5d^2}{-4}$

⑥ $\frac{8y^7z^0}{4y^4z^5} = 2yz$

⑦ $\left(\frac{4f^3g}{3h^6}\right)^3 = \frac{64f^9g^3}{27h^{18}}$

⑧ $\left(\frac{6w^5}{7p^6s^3}\right)^2 = \frac{36w^{10}}{49p^{12}s^6}$

⑨ $\frac{-4c^2}{24c^5} = \frac{-1}{6c^3}$

⑩ $x^3(y^{-5})(x^{-8}) = x^{-5}y^{-5} = \frac{1}{x^5y^5}$

⑪ $p(q^{-2})(r^{-3}) = \frac{p}{q^2r^3}$

⑫ $12^{-2} = \frac{1}{12^2} = \frac{1}{144}$

⑬ $\left(\frac{3}{7}\right)^{-2} = \left(\frac{7}{3}\right)^2 = \frac{49}{9}$

⑭ $\left(\frac{4}{3}\right)^{-4} = \left(\frac{3}{4}\right)^4 = \frac{81}{256}$

⑮ $\frac{22r^3s^2}{11r^2s^{-3}} = \frac{2rs^2s^3}{2rs^5} =$

⑯ $\frac{-15w^0u^{-1}}{5u^3} = \frac{-3}{u^3u^1} = \frac{-3}{u^4}$

⑰ $\frac{8c^3d^2f^4}{4c^{-1}d^2f^{-3}} = \frac{2c^3cd^2f^4f^3}{d^2} =$

$2c^4f^7$

⑱ $\left(\frac{x^{-3}y^5}{4^{-3}}\right)^0 = 1$

(19) $\frac{6f^{-3}g^3h^5}{54f^2g^{-5}h^3} = \frac{6g^3g^5h^5}{54h^3} = \frac{g^8h^2}{9}$

(20) $\frac{-12t^{-1}u^5v^{-4}}{2t^{-3}uv^5} = \frac{-12t^3u^5}{2t^1uv^5v^4} = \frac{-6t^2u^4}{v^9}$

(21) $\frac{r^4}{(3r)^3} = \frac{r^4}{27r^3} = \frac{r}{27}$

(22) $\frac{m^{-2}n^{-5}}{(m^4n^3)^{-1}} = \frac{m^{-2}n^{-5}}{m^{-4}n^{-3}} = \frac{m^4n^3}{m^2n^5} = \frac{m^2}{n^2}$

(23) $\frac{(j^{-1}k^3)^{-4}}{j^3k^3} = \frac{j^4k^{-12}}{j^3k^3} = \frac{j^4}{j^3k^3k^{12}} = \frac{j}{k^{15}}$

(24) $\frac{(2a^{-2}b)^{-3}}{5a^2b^4} = \frac{2^{-3}a^6b^{-3}}{5a^2b^4} = \frac{a^6}{2^3 5a^2b^4b^3} = \frac{a^4}{40b^7}$

(25) $\frac{(q^{-1}r^3)^{-5}}{q^0r^{-2}} = \frac{q^5r^{-15}}{q^5r^{10}} = \frac{q^5q^5}{r^{10}r^{15}} = \frac{q^{10}}{r^{25}}$

(26) $\frac{(7c^{-3}d^3)^{-1}}{c^5de^{-4}} = \frac{(c^5de^{-4})^1}{7c^{-3}d^3} = \frac{c^5c^3d}{7d^3e^4} = \frac{c^8}{7d^2e^4}$

(27) $\frac{(2x^3y^2z)^{-2}}{3x^4yz^{-2}} = \frac{(3x^4yz^{-2})^2}{(2x^3y^2z)^2} = \frac{9x^8y^2z^{-4}}{4x^6y^4z^2} = \frac{9x^2}{4y^2z^6}$

(28) $\frac{223}{225} = \frac{1}{22^2} = \frac{1}{484}$

(29) $\frac{20^5}{20^3} = 20^2 =$ 400 more words