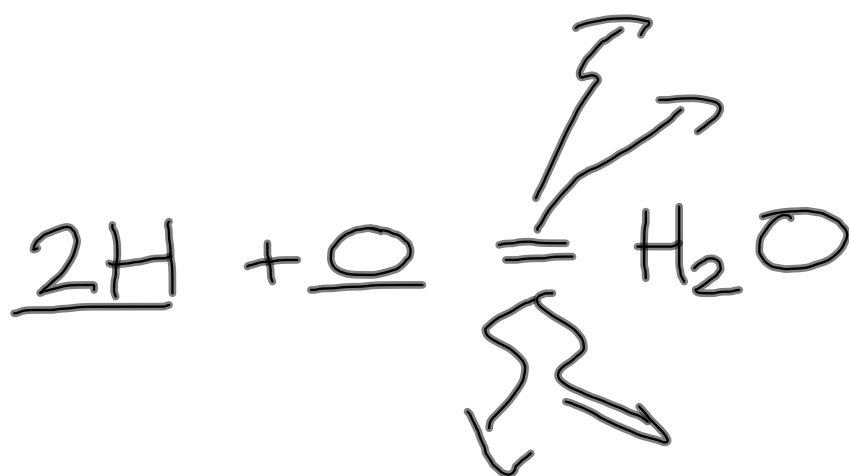


17 chlorine atoms

$$\frac{17 \text{ atoms}}{1 \text{ atoms}} \left(\frac{35 \text{ amu}}{1 \text{ atoms}} \right) = \frac{\text{num}}{\text{den}}$$

10 mg



14, 18, 20, 12, 16

$$12. \frac{xy^2}{2} \cdot \frac{6x}{y^2} = \frac{3\cancel{6}x^2y^{\cancel{2}}}{2y^{\cancel{2}}} = \frac{3x^2}{2}$$

$$14. \frac{a^2b^3c}{a^3bc^2} = \frac{b^2}{ac}$$

$$16. \frac{2x^2}{y} \left(\frac{-y^3}{2x^2} \right)^2$$

$$\frac{2x^2}{y} \cdot \frac{y^6}{4x^4} = \frac{2x^2y^6}{2 \cdot 2x^4y} = \frac{y^5}{2x^2}$$

$$18. \frac{(2hk^3)^3}{(-h^2k^2)^2} = \frac{8h^3k^9}{h^4k^4}$$

$$\frac{8h^3}{h}$$

$$20. \frac{(pq^2r^3)^3}{(p^3q^5r^2)^2} = \frac{\cancel{p^3}q^6r^9}{\cancel{p^3}q^{\cancel{10}}r^4} = \frac{q^4r^5}{p^3}$$

HWA 1/9/10

$$16. \frac{2x^2}{y^3} \left(\frac{-y^3}{2x^2} \right)^2$$

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

$$\frac{1}{x} = x^{-1}$$

$$x^{-2} = \frac{1}{x^2}$$

$$x^{-5} = \frac{1}{x^5}$$

$$\frac{1}{x^{-2}} = x^2$$

$$\frac{x^2}{x^2} = 1 = x^{2-2} = x^0$$

$$x^0 = 1$$

$$\frac{6^{-1} x^{-2} z^3}{5^0 x^{-1} z^{-2}} = \frac{z^3 x z^2}{6 x^2 \cdot 1}$$

$$\frac{\cancel{z} z^5}{6 x \cancel{z}} = \left(\frac{z^5}{6x} \right)$$

$$2^{-2} \cdot 3^2 = \frac{3^2}{2^2} = \frac{9}{4}$$

$$(-5^{-1})^{-2} + 5^2 = 25$$

$$\left[\left(\frac{1}{2} \right)^{-2} \cdot \left(\frac{5}{7} \right) \right]^{-2}$$

$$\left(\frac{1}{2^{-2}} \cdot \frac{5}{7} \right)^{-2}$$

$$\left(4 \cdot \frac{5}{7} \right)^{-2}$$

$$4^{-2} \cdot \frac{5^{-2}}{7^2}$$

$$\frac{7^2}{4^2 \cdot 5^2} = \frac{49}{16 \cdot 25} = \left(\frac{49}{400} \right)$$