

①

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① weigh 10 nuts, then weigh 10 bolts
multiply those weights by 120

∴ That is how much 1200 nuts
and bolts will weigh!

Now weigh out those amounts
for your boss!

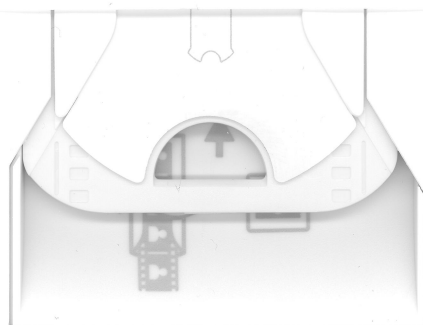
② Isotopes make the weights
for an element different.
Therefore the average weight
will not be a whole number.

③ a) $1 \text{ mol} = 6.022 \times 10^{23} \text{ units}$

b) $\frac{1 \text{ mol}}{6.022 \times 10^{23} \text{ units}}$ or $\frac{6.022 \times 10^{23} \text{ units}}{1 \text{ mol}}$

④ 1. $\text{Al atoms} \times \frac{1 \text{ mol Al}}{6.022 \times 10^{23} \text{ atoms}}$

2. $\text{Au mol} \times \frac{6.022 \times 10^{23} \text{ atoms}}{1 \text{ mol}}$



(2)

4. a. $.25 \text{ mol Al} \times \frac{26.98 \text{ g}}{1 \text{ mol}}$

$\boxed{6.7 \text{ g Al}}$ 2 sig fig

b. $.500 \text{ mol Au} \times \frac{196.7 \text{ g}}{1 \text{ mol}}$

$\boxed{98.4 \text{ g Au}}$ 3 sig fig

c. $5.0 \text{ mol Fe} \times \frac{55.65 \text{ g}}{1 \text{ mol}}$

$\boxed{280 \text{ g Fe}}$ 2 sig fig

d. $25 \text{ mol S} \times \frac{32.07 \text{ g}}{1 \text{ mol}}$

$\boxed{8.0 \times 10^2 \text{ g S}}$ 2 sig fig

(must use S.N.)

