Chem ch 10
wkst Review

1) 165.0 Km/hr = ? mm/sec

$$\left(\frac{165.0\ Km}{1\ hr}\right)\left(\frac{1000\ m}{1\ Km}\right)\left(\frac{1000\ mm}{1\ m}\right)\left(\frac{1\ hr}{3600\ sec}\right) = \boxed{45830\ mm/sec}$$

2) $88.5\ m^2 = ?\ cm^2$

$$\left(\frac{88.5\ m^2}{1}\right)\left(\frac{100\ cm}{1\ m}\right)\left(\frac{100\ cm}{1\ m}\right) = \boxed{8.85 \times 10^5\ cm^2}$$

3) $$\left(\frac{10\ sprinters}{1}\right)\left(\frac{5\ lineman}{2\ sprinters}\right)\left(\frac{1\ BB}{2\ lineman}\right)\left(\frac{10\ coins}{1\ BB}\right)\left(\frac{1\ DR}{5\ coins}\right)$$

$$= \boxed{25\ Distance\ Runners}$$

4) $$\left(\frac{35g\ Pb(SO_4)_2}{1}\right)\left(\frac{1\ mole\ Pb(SO_4)_2}{399.4g\ Pb(SO_4)_2}\right) = \boxed{.088\ mole\ Pb(SO_4)_2}$$

5) $$\left(\frac{156.2g\ Fe(C_2H_3O_2)_2}{1}\right)\left(\frac{1\ mole\ Fe(C_2H_3O_2)_2}{173.9g\ Fe(C_2H_3O_2)_2}\right)\left(\frac{4\ mole\ C\ Atoms}{1\ mole\ Fe(C_2H_3O_2)_2}\right)$$

$$\left(\frac{6.02 \times 10^{23}\ Atoms\ C}{1\ mole\ C}\right) = \boxed{2.163 \times 10^{24}\ Atoms\ C}$$

6) $\left(\frac{4.3\times10^{24}\text{ Atoms Cl}}{1}\right)\left(\frac{1\text{ mole Cl}}{6.02\times10^{23}\text{ Atoms Cl}}\right)\left(\frac{1\text{ mole } Ca(ClO_3)_2}{2\text{ mole Cl}}\right)$

$\left(\frac{207.1\text{ g } Ca(ClO_3)_2}{1\text{ mole } Ca(ClO_3)_2}\right) = \boxed{740\text{ g } Ca(ClO_3)_2}$

7) $\left(\frac{4.52\text{ moles HCl}}{1}\right)\left(\frac{36.5\text{ g HCl}}{1\text{ mole HCl}}\right) = \boxed{165\text{g HCl}}$

8) $\left(\frac{.56\text{ moles } Na^+}{1}\right)\left(\frac{23.0\text{ g } Na^+}{1\text{ mole } Na^+}\right) = \boxed{13\text{g } Na^+}$

9) $\left(\frac{125\text{ g } Na_3PO_4}{1}\right)\left(\frac{1\text{ mole } Na_3PO_4}{164.0\text{ g } Na_3PO_4}\right)\left(\frac{3\text{ mole Na}}{1\text{ mole } Na_3PO_4}\right) = \boxed{2.29\text{ mole Na}}$

10) $\left(\frac{5.6\text{g } CO_2}{1}\right)\left(\frac{1\text{ mole } CO_2}{44.0\text{g } CO_2}\right)\left(\frac{22.4\text{L } CO_2}{1\text{ mole } CO_2}\right) = \boxed{7.94\text{L } CO_2}$