***Expressions, Equations and Inequations Revision***

1. Solve the following equations (where applicable give your answer to $2 $decimal places):
	1. $5x-5=3x+12$ b. $7x=10x+16$ c. $3x+4y=4y+8$

d. $6\left(x-5\right)=25$ e. $4\left(3-2x\right)=7(2x+5)$ f. $3\left(x+5\right)=6(x+5)$

g. $\frac{2}{3}x+5=7$ h. $\frac{6}{7}x-2=10$ i. $\frac{3}{4}x+\frac{1}{2}=5$

j. $\frac{2}{3}+x=\frac{4}{5}$ k. $5\frac{1}{2}x-1\frac{5}{8}=5\frac{3}{4}$ l. $\frac{6}{7}\left(3x+5\right)=\frac{1}{2}$

m. $\frac{2x-3}{4}=5$ n. $\frac{4}{7}\left(3x-5\right)=\frac{2}{5}$ o. $\frac{3x-5}{4}=\frac{2-3x}{5}$

1. Multiply out brackets and collect like terms:
	1. $\left(x+2\right)\left(x+4\right)$ b. $\left(x+6\right)\left(x-1\right)$ c. $\left(x-2\right)\left(x-3\right)$

d. $(2x+3)(3x-5)$ e. $(2x+1)(2x-5)$ f. $(3x-4)(4x-5)$

g. $\left(3x-2\right)-(4x+3)$ h. $\left(2x+1\right)^{2}$ i. $\left(6x-5y\right)^{2}$

j. $3\left(2x-1\right)^{2}$ k. $2\left(5-4x\right)^{2}$ l. $3\left(2x+4\right)^{3}$

m. $\left(2x+3\right)^{2}-\left(x+1\right)^{2}$ n. $4\left(3x+5\right)^{2}-3\left(x+2\right)^{2}$ o. $\left(6+x\right)\left(2x+3\right)^{2}$

1. Solve the following equations: (where applicable leave your answer as a fraction in its simplest form)
	1. $\left(2x-1\right)^{2}=4x(x+5)$ b. $3x^{2}+14=(3x+5)(x-5)$
2. Solving the following inequations (where applicable round answers to 2 sig. fig.):
	1. $\frac{3}{7}x+\frac{5}{8}>\frac{7}{9}$ b. $\frac{2}{3}x-6\geq \frac{1}{4}x+5$ c. $\frac{3}{4}x-\frac{2}{5}<\frac{3}{5}x+\frac{7}{10}$

d. $\frac{2}{3}\left(x+5\right)\leq \frac{5}{7}x+6$ e. $2\frac{1}{2}x-5>\frac{5}{3}x+\frac{2}{4}$ f. $\frac{7}{8}x+5>3x+8$

1. Find:
	1. $3\frac{1}{4}+5\frac{2}{5}$ b. $6\frac{3}{4}+7\frac{2}{3}$ c. $7\frac{3}{4}+4\frac{4}{5} $ d. $5\frac{3}{5}+2\frac{7}{8}$

d. $4\frac{5}{6}-3\frac{1}{2}$ e. $7\frac{1}{4}-3\frac{6}{7}$ f. $3\frac{1}{2}-4\frac{3}{4}$ g. $9\frac{1}{6}-6\frac{5}{8}$

h. $6\frac{1}{5}×5\frac{5}{6}$ i. $3\frac{2}{3}×\frac{9}{22}$ j. $3\frac{1}{2}×2\frac{2}{5}$ k. $4\frac{1}{5}×7\frac{1}{7}$

1. Calculate:
	1. $\frac{3}{4}+2\frac{1}{2}×3\frac{1}{4}$ b. $\frac{25}{32}\left(\frac{4}{5}+\frac{4}{7}\right) $ c. $\frac{3}{4}$ of $\frac{1}{3}+\frac{4}{5}$ d. $\left(2\frac{1}{2}+3\frac{1}{3}\right)^{2}$

e. $2\frac{3}{4}(6\frac{2}{3}-4\frac{5}{6})$ f. $\frac{16}{33}×\left(\frac{3}{4}+\frac{5}{8}\right)^{2}$ g. $4\frac{1}{2}+6\frac{3}{4}-11\frac{1}{4}$ h. $\left(3\frac{1}{2}\right)^{3}$