

HW102

A2

1. $\frac{\text{water amount}}{\text{total}} = \text{goal}$

$$\frac{24(0.15) + x}{24 + x} = \frac{45}{100}$$

2. $\frac{\text{Kool-Aid amount}}{\text{total}} = \text{goal}$

$$\frac{33(0.53) + x}{33 + x} = \frac{65}{100}$$

3. $\frac{\text{wins}}{\text{total}} = \text{goal}$

$$\frac{20 + x}{30 + x} = \frac{75}{100}$$

4. ~~loses~~ $\frac{\text{losses}}{\text{total}} = \text{goal (loss goal)}$

$$\frac{5 + x}{25 + x} = \frac{40}{100} \quad \left. \begin{array}{l} \} \text{ must win } 60\% \\ \} \text{ which means can} \\ \} \text{ lose } 40\%. \end{array} \right\}$$

5. $\frac{\text{right questions}}{\text{Total}} = \text{goal}$

$$\frac{15 + x}{25 + x} = \frac{80}{100}$$

6. $\frac{\text{wrong questions}}{\text{total}} = \text{goal}$

$$\frac{10 + x}{25 + x} = \frac{50}{100}$$

7. $\frac{\text{oil amount}}{\text{total}} = \text{goal}$

$$\frac{20(0.3) - x}{20 - x} = \frac{13}{100}$$

8. $\frac{\text{vinegar amount}}{\text{total}} = \text{goal}$

$$\frac{20(0.7) + x}{20 + x} = \frac{87}{100} \quad \left. \begin{array}{l} \} 13\% \text{ oil} \\ \} 87\% \text{ vinegar} \end{array} \right\}$$

9. $\frac{\text{body fat amount}}{\text{total}} = \text{goal}$

$$\frac{22(0.26) - x}{22 - x} = \frac{6}{100}$$

10. $\frac{\text{water amount}}{\text{total}} = \text{goal}$

$$\frac{22(0.74) + x}{22 + x} = \frac{94}{100}$$