

October 31st

Solve the simultaneous equations

$$\frac{6}{x} - \frac{2}{y} = \frac{1}{2} \quad \text{and} \quad \frac{4}{x} - \frac{3}{y} = 0$$

$$\frac{4}{x} = \frac{3}{y}$$

Hence

$$\frac{6}{x} = \frac{4.5}{y}$$

Substituting gives

$$\frac{4.5 - 2}{y} = \frac{1}{2}$$

Therefore

$$\mathbf{y = 5}$$

$$x = \frac{4y}{3}$$

Hence

$$\mathbf{x = \frac{20}{3}}$$