5.6 Using Reciprocals

What is a reciprocal

refers to a change in a fraction where the numerator and denominator switch

ex.

$\frac{3}{4} \rightarrow \frac{4}{3}$

what is the reciprocal of $2\frac{1}{4} = \frac{9}{4}$

$\frac{4}{9}$

Why are reciprocals important in solving equations

$\frac{4}{3} \cdot \frac{3}{4} = 1$

$\left(\frac{3}{4}\right)\frac{4}{3}x = 8\left(\frac{3}{4}\right)$ multiply by reciprocal

$x = 6$

$\left(\frac{1}{4}\right)10 = \frac{1}{2}h\left(\frac{1}{2}\right)$

$\frac{5}{3} = h$

$\left(-\frac{3}{2}\right) - \frac{2}{3}x = 97\left(-\frac{3}{2}\right)$

$x = -\frac{291}{2} = -145.5$

$12 = \frac{4}{5}x + 4$

$-4 \quad -4$

$\left(\frac{5}{4}\right)8 = \frac{4}{5}x\left(\frac{5}{4}\right)$

$10 = x$

$\frac{V}{B} = \frac{4}{3}\frac{Bh}{B}$

$\left(\frac{3}{4}\right)\frac{V}{B} = \frac{4}{3}h\left(\frac{3}{4}\right)$

$\frac{3V}{4B} = h$

$\frac{C}{l_P} = \frac{1}{2}\frac{l\, m_P}{l_P}$ for m

$(2)\frac{C}{l_P} = \frac{1}{2}m(2)$

$\frac{2C}{l_P} = m$