1. The thickness of a typical human hair is 5 thou. The unit of thou is equal to $\frac{1\text{ inch}}{1000}$.

How thick, roughly, is a typical human hair in mm? (1 cm = 10 mm, and 1 inch = 2.54 cm)

$$5 \text{ thou} \left(\frac{\text{1 inch}}{1000 \text{ thou}}\right) \left(\frac{2.54 \text{ cm}}{\text{1 in}}\right) \left(\frac{10 \text{ mm}}{\text{1 cm}}\right) = \frac{26.4 \times 5}{1000} = 0.127 \text{ mm}$$

2. A rectangle has area 18 in$^2$. Find the dimensions if the length is 7 inches more than the width.

$$x(x + 7) = 18$$
$$x^2 + 7x - 18 = 0$$
$$(x + 9)(x - 2) = 0$$

$$x = 2$$

$$y = x + 7 = 9$$

3. Solve for $p$, \( \frac{1}{p} + \frac{1}{q} = \frac{1}{r} \)

$$qr + pr = pq$$
$$p(r-q) = -qr$$

$$p = \frac{qr}{q-r}$$