Factor Label Method of Problem Solving

Example: Convert 10 rods to furlongs

$$\frac{10 \times 5.5 \times 1}{1 \times 220}$$

$$?\ \text{furlongs} = 10\ \text{rods}\left(\frac{5.5\ \text{yd}}{1\ \text{rod}}\right)\left(\frac{1\ \text{furlong}}{220\ \text{yd}}\right)$$

$$?\ \text{furlongs} = 0.25\ \text{furlongs}$$

(0.2 furlongs)
1 sd

Convert 2 hm to furlongs:

$$?\ \text{furlongs} = 2\ \text{hm}\left(\frac{100\ \text{m}}{1\ \text{hm}}\right)\left(\frac{100\ \text{cm}}{1\ \text{m}}\right)\left(\frac{1\ \text{inch}}{2.54\ \text{cm}}\right)\left(\frac{1\ \text{ft}}{12\ \text{inch}}\right)\left(\frac{1\ \text{yd}}{3\ \text{ft}}\right)\left(\frac{1\ \text{furlong}}{220\ \text{yd}}\right)$$

3 sd

$$\frac{2 \times 100 \times 100 \times 1 \times 1 \times 1 \times 1}{(1 \times 1 \times 2.54 \times 12 \times 3 \times 220)}$$

$$= 0.99419\ldots$$

$$\doteq 1\ \text{furlong}$$