



units: m (inches), r (feet), the scale  $\frac{1}{4}$  ( $\frac{\text{inches}}{\text{foot}}$ ), the inverse of the scale 4 ( $\frac{\text{feet}}{\text{inch}}$ )

1. Given  $r = 44'$ , what is  $m$ ?  $(m = \frac{1}{4} \frac{\text{inches}}{\text{foot}} \cdot 44 \text{ (feet)} = 11')$

2. Given  $m = 30''$ , what is  $r$ ?  $(r = 4 \frac{\text{feet}}{\text{inch}} \cdot 30 \text{ (inches)} = 120')$

The scale in Case-2 is not a dimensionless factor, as it was in Case-1, but is a **rate** with the units inches per foot.