

22) a)  $1 \text{ cm} \rightarrow .01 \text{ m}$   $\frac{x}{91.5} = \frac{.01}{1} \rightarrow x = .915 \text{ meters per yard}$   
 $100 \text{ yds} \rightarrow 91.5 \text{ meters}$

The metric is longer by 8.5 meters ✓

b)  $\frac{.915}{1} \times \frac{x}{270} \quad x = 201.3 \text{ meters}$

The metric is shorter by 1.3 meters ✓

c)  $\frac{.915}{1} \times \frac{x}{440} \quad x = 402.6 \text{ meters}$

The metric is shorter by 2.6 meters ✓

d)  $\frac{.915}{1} \times \frac{x}{880} \quad x = 805.2 \text{ meters}$

The metric is shorter by 5.2 meters ✓

e)  $5 \text{ ft} \rightarrow 1 \text{ yd}$   $\frac{1}{3} \rightarrow \frac{x}{5280} \quad \frac{3x}{5} = \frac{5280}{1} \rightarrow x = 1760 \text{ yds} \rightarrow 1 \text{ mile}$   
 $3280 \text{ ft} \rightarrow 1 \text{ mile}$

$\frac{.915}{1} \times \frac{x}{1760} \quad x = 1610.4 \text{ meters}$

The metric is shorter by 110.4 meters ✓