

2.4 / 2.5 7 8 9 11 14 15 16 (to decimal degrees)

2.4 a) $2145.341 \text{ m} \times \frac{39.37 \text{ in}}{1 \text{ m}} \times \frac{1 \text{ ft}}{12 \text{ in}} = 7038.51 \text{ ft}$

b) $721.142 \text{ m} \times \frac{39.37 \text{ in}}{1 \text{ m}} \times \frac{1 \text{ ft}}{12 \text{ in}} = 2365.95 \text{ ft}$

c) $10,254.06 \text{ m} \times \frac{39.37 \text{ in}}{1 \text{ m}} \times \frac{1 \text{ ft}}{12 \text{ in}} = 33641.86 \text{ ft}$

2.5 a) $600.00 \text{ sft} \times \frac{0.3048 \text{ m}}{1 \text{ sft}} = 182.88 \text{ m}$

b) $100215.23 \text{ sft} \times \frac{0.3048 \text{ m}}{1 \text{ sft}} = 30545.60 \text{ m}$

c) $2500.00 \text{ sft} \times \frac{0.3048 \text{ m}}{1 \text{ sft}} = 762 \text{ m}$

2.7 a) $48983 \text{ sft}^2 \times \frac{1 \text{ acre}}{43560 \text{ sft}^2} = 1.1245 \text{ acre}$

b) $48983 \text{ sft}^2 \times \frac{1 \text{ acre}}{43560 \text{ sft}^2} \times \frac{1 \text{ hectare}}{2.471 \text{ acre}} = 0.4551 \text{ hectare}$

c) $48983 \text{ sft}^2 \times \frac{1 \text{ acre}}{43560 \text{ sft}^2} \times \frac{10 \text{ ch}^2}{1 \text{ acre}} = 11.245 \text{ ch}^2$

2.8 a) $25.654 \text{ acre} \times \frac{43560 \text{ sft}^2}{1 \text{ acre}} = 111750 \text{ ft}^2$

b) $25.654 \text{ acre} \times \frac{1 \text{ hectare}}{2.471 \text{ acre}} = 10.38 \text{ hectares}$

c) $25.654 \text{ acre} \times \frac{10 \text{ ch}^2}{1 \text{ acre}} = 256.54 \text{ ch}^2$

2.9 a) 22.6875 ft

b) 40.542 ft

2.11 a) $50 \text{ m} \times 120 \text{ m} = 6000 \text{ m}^2$
 $6000 \text{ m}^2 \times \frac{1 \text{ hectare}}{10000 \text{ m}^2} \times \frac{2.471 \text{ acre}}{1 \text{ hectare}} = 1.483 \text{ acre}$

b) $221.32 \text{ ft} \times 125.58 \text{ ft} = 27793.37 \text{ ft}^2$
 $27793.37 \text{ ft}^2 \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} = 0.638 \text{ acre}$

2.114 15 16 (15) - decimal degree

$$\begin{array}{r} 23.15 \\ + 0.984 \\ + 12.4 \\ + 12.5 \\ \hline 160.634 \end{array}$$

answer 160

$$\begin{array}{r} 14.15 \\ + 7.992 \\ + 15.6 \\ + 203.67 \\ \hline 231.412 \end{array}$$

answer 231.4

$$\begin{array}{r} 104.56 \\ \times 66.8 \\ \hline 6984.608 \end{array}$$

answer 6980

$$2.115 \quad a) \quad 3.6325 \times 10^2$$

$$b) \quad 1.2 \times 10^2$$

$$c) \quad 363.25^2 = (31950.5625) \approx 1.3195 \times 10^5$$

$$\begin{array}{r} 25.675 \\ + 0.48 \\ + 204.69 \\ \hline 230.845 \end{array}$$

$$\frac{230.845}{10.6} = 21.7778 \approx 2.18 \times 10$$

$$2.116 \quad a) \quad 39^\circ 41' 54'', \quad 41' 54'' = 2514'' = 0.6983^\circ$$

$$= 39.6983^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 0.6929 \text{ rad}$$

$$91^\circ 30' 16'', \quad 30' 16'' = 1816'' = 0.5044^\circ$$

$$= 91.5044^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 1.5971 \text{ rad}$$

$$48^\circ 47' 50'', \quad 47' 50'' = 2870'' = 0.7972^\circ$$

$$= 48.7972^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 0.8517 \text{ rad}$$

$$b) \quad 82^\circ 17' 43'', \quad 17' 43'' = 1063'' = 0.2953^\circ$$

$$= 82.2953^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 1.4562 \text{ rad}$$

$$29^\circ 05' 54'', \quad 05' 54'' = 354'' = 0.0983^\circ$$

$$= 29.0983^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 0.5079 \text{ rad}$$

$$68^\circ 36' 23'', \quad 36' 23'' = 2183'' = 0.6064^\circ$$

$$= 68.6064^\circ \times \frac{1 \text{ rad}}{57.2958^\circ} = 1.1974 \text{ rad}$$