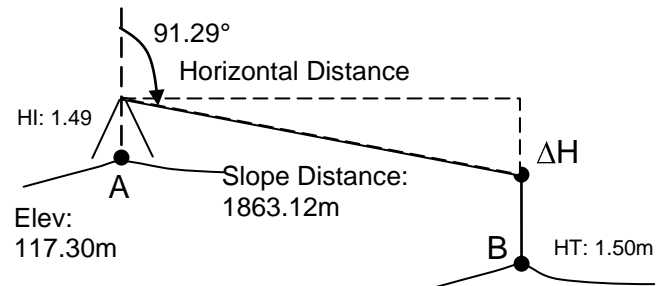


MATHEMATICS ANSWERS

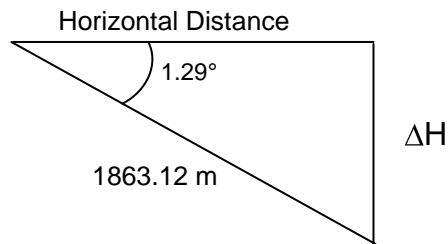
Level One

Trig Heights # 1

1.



2. .

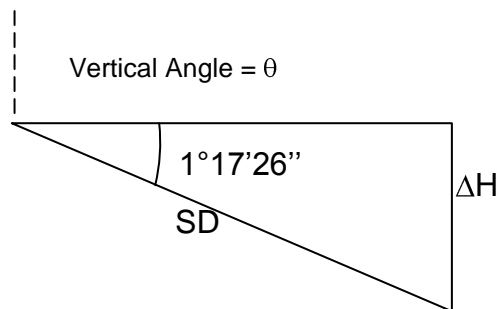


$$\Rightarrow \frac{\text{Horizontal Distance}}{\text{Slope Distance}} = \cos(1.29^\circ)$$

$$\Rightarrow \text{Horizontal Distance} = 1863.12 \times \cos(1.29^\circ)$$

$$\Rightarrow = 1862.65\text{m (2.d.p)}$$

3. .



$$\text{Change in height} = -\Delta H + HI - HT$$

$$= -SD \sin \theta + HI - HT$$

$$\text{Change in height} = -41.944 + 1.49 - 1.50 = -41.954\text{m}$$

$$4. 117.30\text{m} - 41.954\text{m} = 75.346\text{m (Elevation of B)}$$

$$5. \frac{0.86 \times (1863.12)^2}{2 \times 6374000}$$

$$= 0.234\text{m}$$

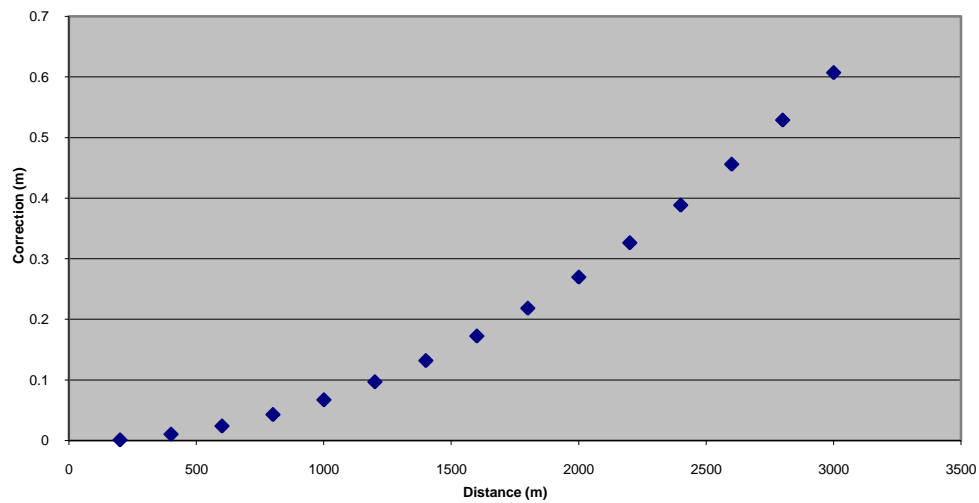
$$6. 75.346 + 0.234 = 75.580\text{m}$$

7.

200	0.003
400	0.011
600	0.024
800	0.043
1000	0.067
1200	0.097
1400	0.132
1600	0.173
1800	0.219
2000	0.270
2200	0.327
2400	0.389
2600	0.456
2800	0.529
3000	0.607

8).

Effect of Curvature on Distance Correction



10) Parabolic