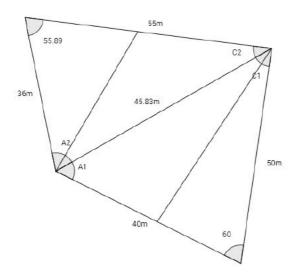
Student 3: Low Merit

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$$AC^{2} = 50^{2} + 40^{2} - 2 \times 50 \times 40 \times \cos 60$$

$$AC^{2} = 2100$$

$$\sqrt{ans}$$

$$AC = 45.83m$$

Area of triangle ACD = $\frac{1}{2} \times 40 \times 50 \times \sin 60 = 866.03 m^2$

Half area of triangle ACD = one section $\frac{1}{2} \times 866.03 = 433.01m^2$

$$\frac{\sin A1}{50} = \frac{\sin 60}{45.83} \text{ (x50)} \qquad \sin A1 = 0.94 \text{ (sin}^{-1}\text{)} \qquad A1 = 70.88^{\circ}$$

 $C1 = 180 - 70.88 - 60 = 49.12^{\circ}$ (angle sum in triangle is 180)

$$\cos B = \frac{55^2 + 36^2 - 45.83^2}{2 \times 55 \times 36} \quad \cos B = 0.56 \text{ (cos}^{-1})$$
 B=55.89

Area of triangle BCA = $\frac{1}{2} \times 55 \times 36 \times \sin 55.89 = 819.68m^2$

Half area of triangle BCA = one section
$$\frac{1}{2} \times 819.68 = 409.84m^2$$

Therefore all sections are at least 400m². In triangle ACD the sections are 433.01m² each. In triangle BCA the sections are 409.84m²each.