Assessment in IGCSE Mathematics 0580

Session 2: Handout 2.16(b)

Reviewing a mark scheme

Look at the following candidates' responses. How does your mark scheme fit these responses? Will you alter anything in your mark scheme?

Student 1

(a) $11^2 + 9.5^2 - 2 \times 9.5 \times 11 \cos 70° = \sqrt{139.76779} = 11.8$

(b) 180 – 70

(c) $\frac{AD}{\sin 43} = \frac{11.8}{\sin 110}$ AD = $\frac{11.8 \times \sin 43}{\sin 110} = 8.56$

Student 2

(a) 11.9 no working

(b) BAC = 90 – 37= 53 ACB = 180 – (70 + 53) = 57
ACD = 90 – 57 = 33 ADC = 180 – (33 + 37) = 110

(c) 6.9 no working

Student 3

(a) $11.1^2 + 9.5^2 - 2 \times 9.5 \times 11.1 \cos 70 = 2.56 \cos 70 = \sqrt{0.8756} = 0.936$

(b) 360 – 180 – 70 = 110

(c) $\frac{AD}{\sin 33} = \frac{0.936}{\sin 110}$ AD = 0.542

Student 4

(a) $11.1^2 + 9.5^2 - 2 \times 9.5 \times 11.1 \cos 70 = \sqrt{79.89298} = 8.94$

(b) When added to ABC they give 180.

(c) AD = 8.94 × sin 33/sin110 = -202