Marked example 1

Paper 1 style · No calculator

1 5 marks SL 3.5 · 3.6 ●○○ Routine

The point P lies on the unit circle, and the angle from the positive x-axis to OP is $\frac{5\pi}{6}$.

(a) Write down the exact coordinates of P. **[2]**

(b) Find the exact value of $\tan\frac{5\pi}{6}$. **[2]**

(c) Write down another value of α, $0 \leq \alpha \leq 2\pi$, such that $\sin\alpha = \sin\frac{5\pi}{6}$. **[1]**

MARKSCHEME (a)

$x = -\frac{\sqrt{3}}{2}$ **A1**

$y = \frac{1}{2}$ **A1**

Total 2 marks

MARKSCHEME (b)

$\frac{1/2}{-\sqrt{3}/2}$ **M1**

$-\frac{1}{\sqrt{3}}$ **A1**

Total 2 marks

Note Or $-\frac{\sqrt{3}}{3}$.

MARKSCHEME (c)

$\frac{\pi}{6}$ **A1**

Total 1 mark

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