Name:
Group 1
Result:

1. NO GDC   (3 points)
An angle θ is such that $\sin\theta = \frac{2}{5}$ and $\frac{\pi}{2} < \theta < \frac{3\pi}{2}$. Find the exact value of $\cos\theta$ and $\tan\theta$.

2.   (2 points)
(a) Find the angle between the line $y = 2x + 3$ and the x-axis.

(b) Another line intersects the x-axis at $150°$ and crosses the y-axis at $y = 1$. Find the equation of this line in the form $y = mx + c$, where the coefficients are given exactly.

3.   *(7 points)*
Solve the following equations for $0 \leqslant \theta < 2\pi$. If possible give your answers in terms of π.

(a) $\sin \theta = -\frac{\sqrt{3}}{2}$

(b) $\tan \theta = 4$

(c) $\cos^2 \theta + \cos \theta = \sin^2 \theta$

(7 points)