3(a)	Solve $2x-3=5x+2$ to obtain $-\frac{5}{3}$
	Attempt solution of linear equation where $2x$ and $5x$ have different signs
	Obtain $\frac{1}{7}$
	Alternative Method for Question 3(a)
	State or imply non-modulus equation $(2x-3)^2=(5x+2)^2$
	Attempt complete solution of three-term quadratic equation
	Obtain $-\frac{5}{3}$ and $\frac{1}{7}$ or equivalents
3(b)	State or imply $\cos\theta=-\frac{3}{5}$
	Attempt correct process for finding third quadrant angle
	Obtain 4.07

7(a)	Substitute $x = -2$, equate to zero and attempt solution
	Obtain $32 - 8k + 4k - 34 + 18 = 0$ or equivalent and hence $k = 4$
7(b)	State $\alpha = -2$
	Divide by $x + 2$ at least as far as $2x^3 + mx$
	Obtain $2x^3 + 4x + 9$
	Rearrange $2x^3 + 4x + 9 = 0$ to confirm $x = \sqrt[3]{-2x - 4.5}$
7(c)	Consider sign of $x - \sqrt[3]{-2x - 4.5}$ or equivalent for -1.4 and -1.0
	Obtain $-0.2...$ and $0.3...$ or equivalents and justify conclusion
7(d)	Use iterative process correctly at least once
	Obtain final answer -1.26
	Show sufficient iterations to 5 sf to justify answer or show sign change in interval $[-1.265,\ -1.255]$

3(a)	Solve $3x-4=2x+5$ to obtain $x=9$
	Attempt solution of linear equation where $3x$ and $2x$ have different signs
	Obtain $x=-\frac{1}{5}$
	Conclude $-\frac{1}{5}\leqslant x\leqslant 9$
	Alternative Method for Question 3(a)
	State or imply non-modular equation $(3x-4)^2=(2x+5)^2$
	Attempt solution of three-term quadratic equation or inequality
	Obtain values $-\frac{1}{5}$ and 9
	Conclude $-\frac{1}{5}\leq x\leq 9$
3(b)	State $7^{0.01N}=9$
	Use logarithms to find value of N
	Conclude with single integer 112

4(a)	Carry out division as far as $x^2 \pm 10x$
	Obtain quotient $x^2 - 10x + 17$
	Confirm remainder is -11
4(b)	State or imply that equation is $(x^2 + 3)(x^2 - 10x + 17) = 0$
	Attempt solution of *their* three-term quadratic quotient from **(a)** to give two exact roots
	Obtain $5 \pm \sqrt{8}$ or $5 \pm 2\sqrt{2}$ and no other solutions

2(a)	Apply logarithms to both sides and use relevant logarithm property
	Obtain $x < \dfrac{\ln 0.05}{\ln 4}$ or equivalent and hence $x < -2.16$
2(b)	Attempt solution of equations $3x + 8 = \pm 9$ or of quadratic equation $(3x+8)^2 = 9^2$
	Obtain values $-\frac{17}{3}$ and $\frac{1}{3}$
	Conclude $-\frac{17}{3} < x < \frac{1}{3}$
2(c)	State $-5, -4, -3$ only

5(a)	Substitute $x = \frac{3}{2}$ equating to 0, and $x = -1$ equating to -15
	Obtain $\frac{27}{8}a + \frac{9}{4}b - \frac{3}{2}a - 24 = 0$
	Obtain $-a + b + a - 24 = -15$
	Solve to obtain $a = 2$ and $b = 9$
5(b)	Divide $\text{p}(x)$ by $2x - 3$
	Obtain quotient $x^2 + 6x + 8$
	Conclude $(2x-3)(x+2)(x+4)$
5(c)	Use factorised form to determine value of $\sin\theta$, with $-1 < \sin\theta < 1$
	Obtain finally $\sin\theta = -\frac{3}{4}$ only and hence angle 228.6

2(a)	Draw V-shaped graph with vertex on positive x-axis
	Draw correct graph of $y = 4x - 5$
2(b)	Solve linear equation or inequality with signs of $2x$ and $4x$ different
	Obtain $-2x + 9 = 4x - 5$ and hence $x = \frac{7}{3}$
	Conclude $x > \frac{7}{3}$
	Alternative Method for Question 2(b)
	State or imply non-modulus equation (or inequality) $(2x-9)^2 = (4x-5)^2$
	Attempt solution of three-term quadratic equation (or inequality)
	Obtain at least $\frac{7}{3}$ and conclude $x > \frac{7}{3}$

5(a)	Substitute $x = \frac{1}{2}$ and $x = 3$, and equate each to zero to produce two equations
	Obtain $\frac{1}{16}a + \frac{1}{8}b = -\frac{3}{4}$
	Obtain $81a + 27b = -27$
	Solve simultaneous equations to obtain $a = 2$ and $b = -7$
5(b)	Divide by $2x^2 - 7x + 3$ or successively by $2x - 1$ and $x - 3$
	Obtain quotient $x^2 + 5$
	State fully factorised form $(2x-1)(x-3)(x^2+5)$
5(c)	Attempt solution of at least $\cot 2\theta = 3$
	Obtain $\tan 2\theta = \frac{1}{3}$ and hence $\theta = 0.161$