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4. (a) Express the complex number $18\sqrt{3} - 18i$ in the form

$$r(\cos\theta + i\sin\theta) \quad -\pi < \theta \leqslant \pi$$

(3)

(b) Solve the equation

$$z^4 = 18\sqrt{3} - 18i$$

giving your answers in the form $re^{i\theta}$ where $-\pi < \theta \leqslant \pi$

(5)

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Q4

(Total 8 marks)