1. Give an $\epsilon$-$\delta$ proof that

$$\lim_{x \to 4} (3x - 7) = 5.$$ 

Note: You should follow these steps:

(i) First, write down, in terms of $\epsilon$ and $\delta$, what it is that we need to prove.

(ii) Then, do a preliminary analysis to find an estimate for $\delta$ in terms of $\epsilon$.

(iii) Finally, use your estimate to write down the formal proof.

This problem is worth 10 points.