

# QUIZ 3

Time: 10min

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

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

*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.*