

# CR11 - Graded exercise sheet - Week 2

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**Exercise 2.1:** /10

Let  $A$  be a non-c.e. set. Use the finite extension method to prove that there exists a set  $B$  which is not  $A$ -c.e. and such that  $A$  is not  $B$ -c.e.

Recall that  $W_e = \text{dom } \Phi_e$ .

**Exercise 2.2:** /10

Show that  $\text{Tot} = \{e : W_e = \mathbb{N}\}$  is  $\Pi_2^0$ -complete.