

EXAM 3 (duration: 25 minutes)

DatZ1143: Discrete mathematics for computing

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Name and surname:

Student number:

Date:

Questions

(There are 5 questions. Each is 2 points. Total is 10 points.)

1. List the members of the set

$$I = \{a \mid a \text{ is a nonnegative integer and } 2a + 1 < 11\}.$$

2. Determine whether each of these is true or false. (0.5 point each)

- $\{x\} \subseteq \{x\}$
- $x \in \{x\}$
- $\emptyset \subset \{x\}$
- $\emptyset = \{\}$

3. Let $A = \{-1, 0, 1\}$ and $B = \{3, 5\}$. List the members of the set $A \times B$.

4. Write down all subsets of the set $C = \{a, b, c\}$.

5. Let $D = \{-2, -1, 0, 1, 2\}$ and $E = \{-3, -1, 1, 3\}$.

5.a) List the members of the set $D - E$:

5.b) List the members of the set $E - D$: