

Mathematics 300

Quiz 29

Name: _____

You must show your work to get full credit.

1. Let

$$A = \{15x + 10y : x, y \in \mathbb{Z}\}$$

$$B = \{n \in \mathbb{Z} : 5 \mid n\}.$$

Prove $A = B$.

2. Draw the Venn diagrams for

(a) $A \cap B^c$

(b) $(A \cap B) \cup (A \cap C) \cup (B \cap C).$