

Name: Key

Math 221: Quiz 3 - 6/5/15

Solve the following problems. Please use a pencil if possible.

1. Describe or list the elements in the set $S = \{x^3 \mid x \in \mathbb{Z}\}$. [15 Points]

$\{\dots, -27, -8, -1, 0, 1, 8, 27, \dots\}$

All perfect cubes, both positive and negative.

2. Fill in the blanks with either \in , \notin , \subseteq , $\not\subseteq$. [15 Points Each]

(a) $\{0, 2, 4, 6, \dots\} \not\subseteq \mathbb{N}$

(c) $\emptyset \subseteq \{0\}$

(b) $-6 \in \{3x \mid x \in \mathbb{Z}\}$

(d) $\frac{1}{2} \in \mathbb{R}$

3. Draw the Venn Diagram for the set $A \cap (B \cup C)$ (Note: I put 2 diagrams on here in case you make a mistake and need another.) [25 Points]

