

Name:

- [6] 1. Use previously established logical equivalences to prove the following:

$$P \rightarrow (Q \wedge R) \equiv (P \rightarrow Q) \wedge (P \rightarrow R)$$

2. For each of the following sets, describe the set in English, and then list the elements of the set using the “roster method”:

$$A = \{x \in \mathbb{Z} : -3 \leq x \leq 5\}$$

$$B = \{x \in \mathbb{R} : x^2 = 4\}$$

$$C = \{2k + 1 : k \in \mathbb{Z}\}$$

$$D = \{k \in \mathbb{Z} : k \text{ is even}\}$$