

1.4 Comparing Sets

5. Assume A and B are two nonempty sets. Explain the meaning of each of the following in your own words.
(a) A equals B .

(b) A is equivalent to B .

6. Assume A is a set such that $n(A) = 6$.

(a) Determine the number of distinct subsets of A . _____

(b) Determine the number of distinct proper subsets of A . _____

(c) Using Pascal's Triangle (without proof - see page 41), how many different subsets of size 3 can be formed using elements from A ? _____

7. Classify each by writing "*true*" or "*false*" in the blank provided.

(a) $\{a, b, c\} = \{b, c, a\}$ _____

(b) $n(\{a, b, c\}) = n(\{1, 2, 3\})$ _____

(c) $\{b\} \in \{a, b\}$ _____

(d) $\{0, 1\} \subset \{0, \{0, 1\}, 2\}$ (be careful) _____

(e) $\{\{0, 1\}\} \subseteq \{0, \{0, 1\}, 2\}$ _____

(f) $\{2, 4, 6\}$ and $\{4, 6, 8\}$ are equivalent sets. _____

(g) $\{\emptyset\}$ and $\{0\}$ are equivalent sets. _____