

# Chapter 3:

## Mid-chapter Review

- Make sure you have completed all of the previous homework assignments from sections 3.1 to 3.3.
- Read *FREQUENTLY ASKED Questions* on page 176-177.
- Complete the following from *PRACTISING* on page 178:  
**#1 – 7 (all)**

# WYNTKABATD

Describe sets, the number of elements in sets, and relationships between sets using words and/or set notation.

- disjoint	correct: A and B are disjoint sets	not: A is disjoint with B
- subsets	words: P is a subset of Q	set notation: $P \subset Q$
- union of sets	words: the union of X and Y	set notation: $X \cup Y$
- intersection of sets	words: the intersection of M and N	set notation: $M \cap N$
- complement of a set	words: the complement of C	set notation: $C'$
- number of elements	words: the number of elements in set F	set notation: $n(F)$

Interpret set-builder notation:  $\{x|0 < x < 5, x \in W\}$

$$\{a|a = 2x, -2 < x < 2, x \in I\} \quad \text{or} \quad \{2a| -2 < a < 2, a \in I\}$$

Write sets using set notation and illustrate sets using Venn diagrams

Understand the relationships between the numbers of elements in different parts of a Venn diagram:

$$n(U) = n(A \cup B) + n(A \cup B)'$$

$$n(A \cup B) = n(A) + n(B) - n(A \cap B) \rightarrow \text{called the Principle of Inclusion \& Exclusion}$$

Use Venn diagrams and the principle of inclusion and exclusion to solve problems involving non-disjoint sets.