The Number of Elements in a Set

set A = {*a, b, c, d, e*}   set B = {1, 2, 3}

if set C = {*A, B, C, D, E, F, G,*}

The empty set, $\varnothing$, has no elements...

The set of integer values, Z..

We can count the number of elements in each set.

If a Set has n elements, then that Set has 2^n subsets.

set A = {*a, b, c, d, e*}   set B = {1, 2, 3}

set C = {*A, B, C, D, E, F, G,*}

If a Set has n elements, then that Set has 2^n subsets.

set S = {a, b, c, d}   Find the subsets of set S

set S has 2^4 subsets or 16 subsets

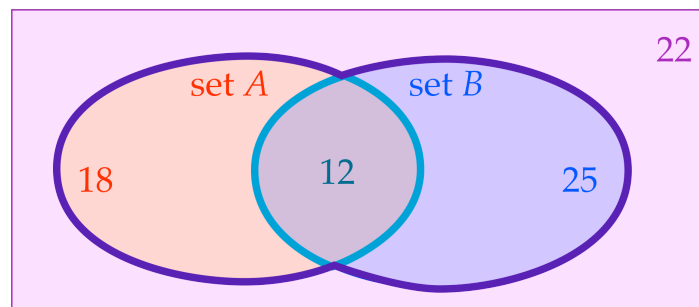0 elements   1 element   2 elements   3 elements   4 elements

set S has 16 Total Subsets

$$n(U) = 18 + 12 + 25 + 22 = 77$$

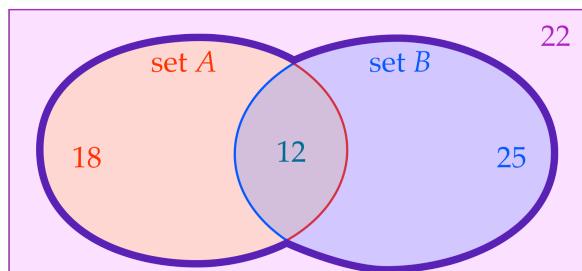$$n(A) = 18 + 12 = 30 \qquad n(B) = 25 + 12 = 37$$

$$n(A \cap B) =$$
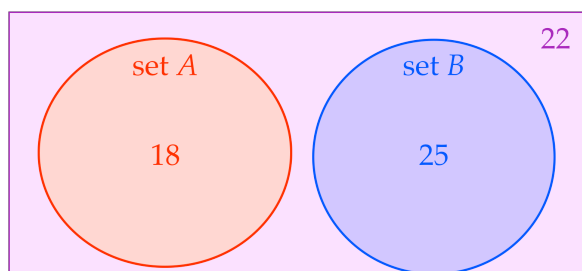
$$n(A \cup B) =$$
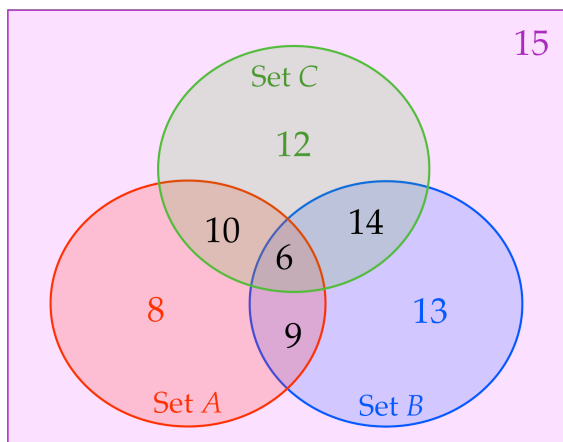
If a Set A and Set B are finite sets...

$$n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

If a Set A and Set B have no elements in common...

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

The Number of Elements in a Set

$n(A)$

$n(B) - n(C)$

$n(A \cap B)$

$n(A \cup C)$