

pg. 4 - math 2 book part 2
 Unit 11 Probability
11.1 Venn diagrams

Mar 24-7:53 AM

Event: an activity or experim^{ent}
 (what you want to occur)
Sample Space: total possible outcomes
 for the event
Subset: part of the sample
 space
Complement: all the outcomes
 in the sample space
 that are not included
 in the subset



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SS = classroom
 - A = girls
 - complement A = boys
 SS = alphabet
 A = vowels
 complement A = consonants
 Subset and its complement
 can never overlap.

Mar 24-8:01 AM

Notation complement
 Not A
 $\sim A$
 A^c

Mar 24-8:04 AM

Intersection:  the middle
 what they have of
 in common Venn
 - AND - $A \cap B$
Union: 
 includes every
 element in both sets
 - OR - $A \cup B$
 A or B

Mar 24-8:05 AM

$S = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$
 Subset A = even #'s
 $0, 1, 2, 3, 4, 5, 6, 7, 8, 9$
 $A = \{2, 4, 6, 8\}$
 $\sim A = \{0, 1, 3, 5, 7, 9\}$
 $A \cap \sim A = \{ \}$
 \emptyset
 the empty set
 0 does not represent
 the empty set.

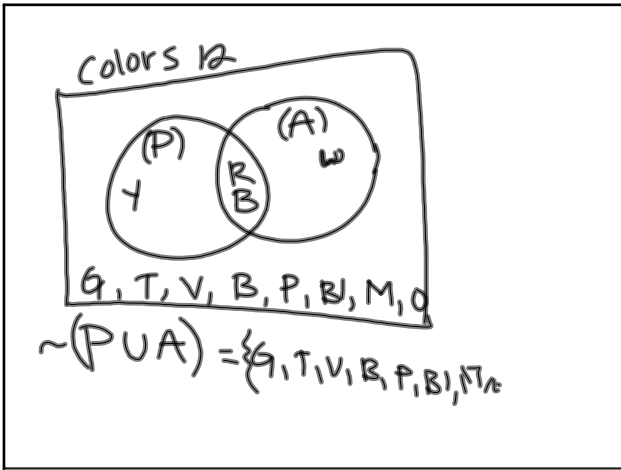
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Any set and its complement
will never, ever, ever
have anything in common

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EX 1: $S = \{ \text{Green, violet, Turquoise, yellow, Blue, Red, White, Brown, peach, Black, Magenta, orange} \}$
 Subset $P = \{ \text{primary colors} \}$
 Subset $A = \{ \text{colors American flag} \}$
 $P = \{ \text{red, yellow, blue} \}$
 $A = \{ \text{red, white, blue} \}$
 $P \cup A = \{ \text{red, yellow, blue, white} \}$
 $P \cap A = \{ \text{red, blue} \}$
 $\sim P = \{ \}$

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Mar 24-8:22 AM

① $S = \{ \text{A B C D E F G H I J K L M N O P Q R S T U V W X Y Z} \}$
 $F = \{ \text{R, E, B, C, A} \}$
 $L = \{ \text{H A G E N} \}$
 $F \cup L = \{ \text{R E B C A H G N} \}$
 $F \cap L = \{ \text{E A} \}$

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③ 52 cards
13 cards of 4 suits

♣ A 2 3 4 5 6 7 8 9 10 J Q K
 ♠ A 2 3 4 5 6 7 8 9 10 J Q K
 ♠ A 2 3 4 5 6 7 8 9 10 J Q K
 ♡ A 2 3 4 5 6 7 8 9 10 J Q K

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