

The slide features a light beige background with a blue grid pattern in the top-left and bottom-right corners. A dark blue rectangular area is positioned on the left side, containing the text. A vertical red bar is located on the far left edge of the slide.

Algebra 1

Chapter 3
Section 3-8

Vocabulary

Union	Union of two sets is the group of elements in either set **written as \cup
Intersection	Intersection of two sets is the group of elements in both sets **written as \cap
Disjoint Sets	Sets that have no common elements

Examples

UNION

$$A = \{1, 2, 3, 4\}$$

$$B = \{3, 4, 5, 6, 7\}$$

$$A \cup B = \{1, 2, 3, 4, 5, 6, 7\}$$

INTERSECTION

$$A = \{\text{Red, Blue, Green}\}$$

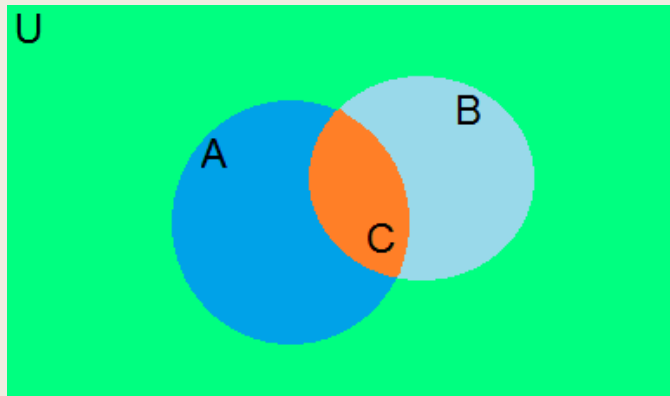
$$B = \{\text{Blue, Purple}\}$$

$$A \cap B = \{\text{Blue}\}$$

Venn Diagrams

What is $A \cap B$? What is $A \cup B$?

What is $(A \cap B)'$?



Orange (C)

Dark Blue, Orange, and Light Blue
Green, Dark Blue, and Light Blue

Examples

$U = \{x \mid x \text{ is any object}\}$

$A = \{x \mid x \text{ is a US coin}\}$

$B = \{x \mid x \text{ is US currency}\}$

$C = \{x \mid x \text{ has a likeness of Abe Lincoln}\}$

$U = \{x \mid x \text{ is US University or College}\}$

$A = \{\text{Missouri, Arkansas, Pepperdine}\}$

$B = \{x \mid x \text{ is an SEC school}\}$

$C = \{\text{California, Arizona, Gonzaga, Pepperdine}\}$

Draw a Venn Diagram.

Is A a subset of B?

List $B \cap C$ in roster form.

Name Two Disjoint Sets.

What is $A \cup C$?

Name an element of $(A \cup B \cup C)'$.

What is $A \cap B'$?

Draw Picture

Yes

Gonzaga}

{Penny, \$5 Bill}

Tech

B and C

{Missouri, Arkansas, Pepperdine, California, Arizona,

Many answers... examples: Ohio State, Michigan, Texas