

Set Theory – Basic Sets and Word Problems

Put an “X” in each box that represents a category that each number falls into.

	Not a Real #	Real	Rational	Irrational	Integer	Whole	Natural
.523954 ...							
$\sqrt{-36}$							
$\frac{2}{53}$							
.24365							
-714.233							
$\frac{0}{81}$							

Use the information given for sets A, B and C to find the following. Label and fill the venn diagram to make it easier!!

** Be sure to enclose your elements with brackets! **

$A = \{1, 2, 3, 4, 5, 6, 7, 8\}$

$B = \{-1, 0, 1, 2, 3\}$

$C = \{-6, -4, -2, 0, 2, 4\}$

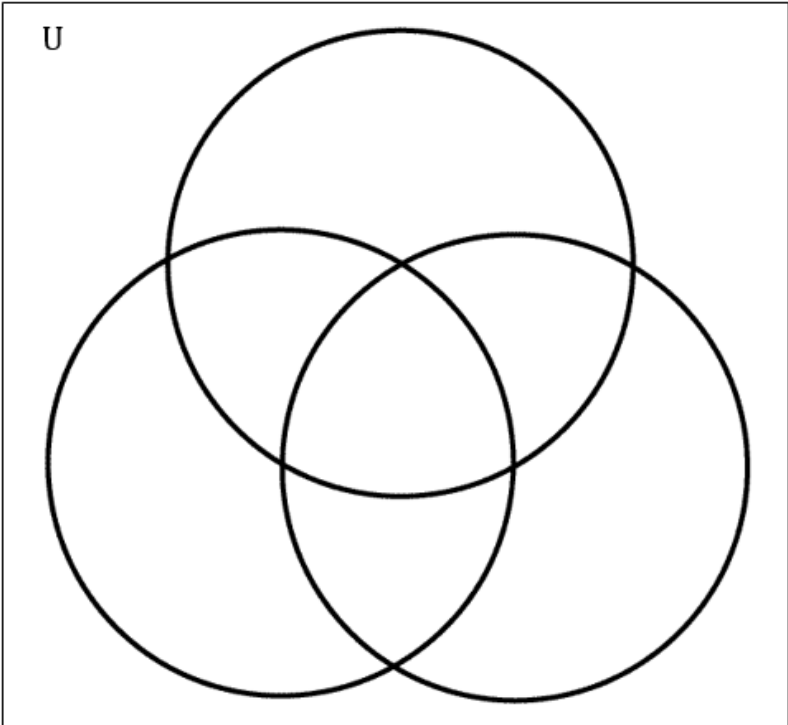
1.) $A \cap B =$

2.) $B \cup C =$

3.) $(A \cap C) \cap B =$

4.) $A \cap B \cap C =$

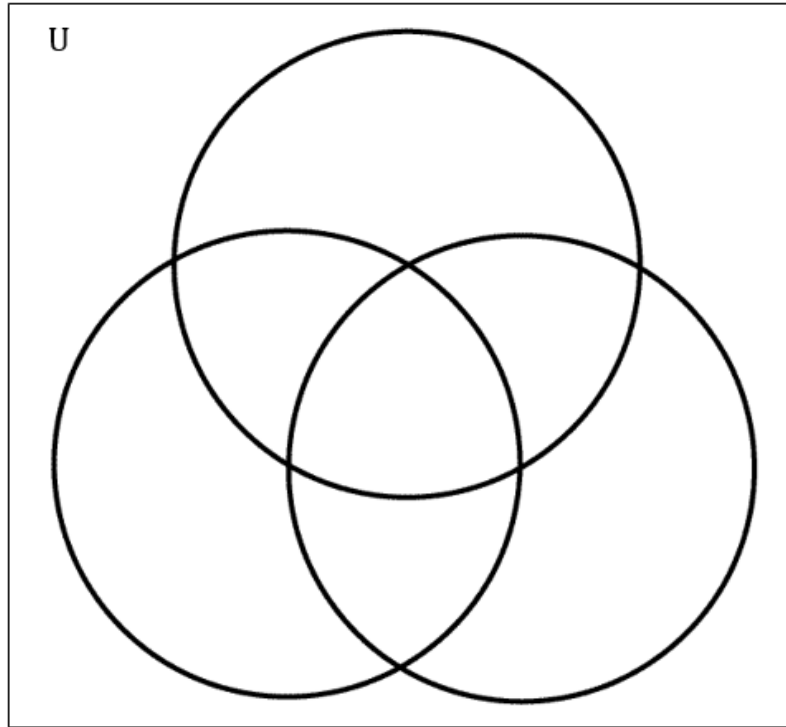
5.) Is $B \subset A$? Why or why not?



Use the following information to answer the questions below. Label and fill the venn diagram to make it easier!!

** Be sure to enclose your elements (student names) with brackets!! **

- Katie is taking History and Art
- Dale and Blake are both taking Science, but not Art or History
- Lauren is taking Art, History, and Science
- Jake is taking Art and Science



6.) How many students are taking $Science \cap Art$? Who are these students?
(How many students are taking both Science and Art?)

7.) How many students are taking $Science \cup History$? Who are these students?
(How many students are taking Science, History, or both?)