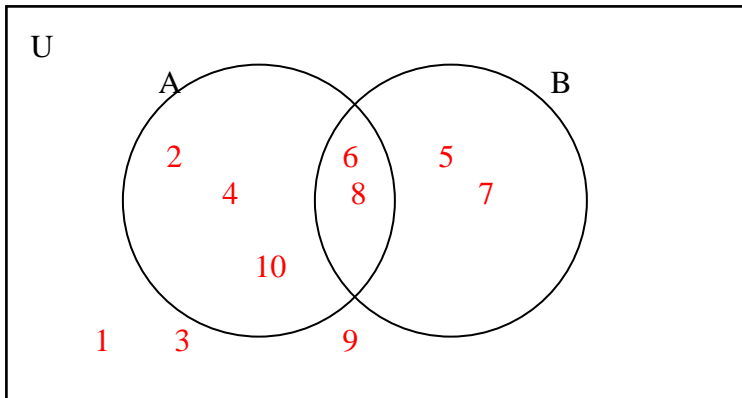


1. Given the sets  $A = \{2,4,6,8,10\}$ ,  $B = \{5,6,7,8\}$ , and the universal set  $U = \{x \mid 1 \leq x \leq 10\}$ :

a. Draw a Venn diagram to represent these sets listing the elements in each part of each set.



b.  $A \cap B = \{6, 8\}$

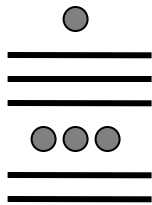
c.  $\overline{A} = \{1, 3, 5, 7, 9\}$  Notice the line over set A, meaning the compliment of set A.]

d.  $n(A \times B) = \underline{20}$  [Note:  $n(A) = 5$  and  $n(B) = 4$  so the product is 20]

6pts

2. Convert each of the following into a base ten number.

a.



$16 ( 20 ) + 13 ( 1 ) = 320 + 13 = 333$

b. MDCCXLVII = 1747

6pts

3. Convert each of the following into a numeral for the ancient system indicated.

a. Write 582 as an Egyptian number.



b. Write 582 as a Babylonian number.

$9(60) + 42$

