# EXAMPLE 1

Indicate the multiples of 4 and 8 from 1 to 400 inclusive, using set notation and noting any subsets. Also represent the sets and subsets in a Venn diagram.

# PRACTICE 1

1. Draw a Venn diagram to represent these sets:

* The universal set: U = {natural numbers from 1 to 50 inclusive}
* S = {multiples of 6}
* T = {multiples of 12}
* X = {multiples of 15}
* Y = {multiples of 17}

1. List the disjoint subsets, if there are any.
2. Is each statement true or false? If false, correct it. Explain your answer.
   1. S T
   2. Y U
   3. S S
   4. Y’ = {even numbers from 1 to 50}
   5. In this example, the set of natural numbers from 51 to 60 equals { }.

# PRACTICE 2

Brazil (B) and British Columbia © have the following species:

B = {owl, eagle, cougar}

C = {owl, eagle, cougar, sea lion, bighorn sheep, whale}

1. Illustrate these sets of species in a Venn diagram.
2. Is either a subset of the other? Explain.

# PRACTICE 3

1. Draw a Venn diagram to show

* The universal set: U = {integers from -20 to 20}
* E = {multiples of 4}
* S = {multiples of 9}

1. List the disjoint subsets, if there are any.

# PRACTICE 4

Make a list of different machines and technology around your home. Organize these items into sets using a Venn diagram. Explain what the sets represent.

# PRACTICE 5

Consider this universal set:

U = {A, B, C, D, E, F, G, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0}

1. List the following subsets:
   * + S = {characters formed with straight lines only}
     + C = {characters formed with curves only}
2. Is the statement C = S’ true or false? Provide your reasoning.

# PRACTICE 6

Which choice describes the Venn diagram best?

1. U={four-legged animals}, A={animals kept by humans}, P={pets}
2. U={animals kept by humans}, A={pets}, P={animals kept by humans}
3. U={all animals}, A or P={animals kept by humans}
4. U={farm animals}, C and I = {pets}