

Worksheet

- Choose the correct option.
 - The set which represents $A = \{x \mid x \leq 2, x \text{ is a prime number}\}$ is
 - an infinite set
 - a singleton set
 - a null set
 - a finite set with 2 elements
 - The cardinal number of the set $B = \{x \mid x \text{ is a factor of } 16\}$ is
 - 3
 - 4
 - 5
 - 6
- Represent the following sets in roster form and in set builder form:
 - The set of all multiples of 8 less than 50.
 - The set of all two-digit numbers whose sum of the digits is 8.
 - The set of all negative integers greater than -8 .
- Find the cardinal number of the following sets:
 - $P = \{x \mid x \text{ is a vowel in the word POISONOUS}\}$
 - $Q = \{x \mid x \text{ is a prime factor of } 420\}$
 - $C = \{x \mid x \text{ is an odd composite number less than } 10\}$
 - $D = \{x \mid x \text{ is a 3-digit number having the same digits}\}$
- Which of the following pairs of sets are equal sets?
 - $M = \{x \mid x \text{ is a multiple of } 9 \text{ less than } 100\}$
 $N = \{x \mid x \text{ is a multiple of } 3 \text{ less than } 100\}$
 - $O = \{x \mid x \text{ is a vowel in the word FAVOURITE}\}$
 $P = \{x \mid x \text{ is a vowel in the English alphabet}\}$
- Write whether the following pairs of sets are overlapping sets or disjoint sets:
 - $M = \{m, i, n, u, t, e\}$
 $N = \{s, e, c, o, n, d\}$
 - $O = \{x \mid x \text{ is a prime number less than } 10\}$
 $P = \{x \mid x \text{ is an odd number less than } 10\}$
 - $Q = \{x \mid x \text{ is a positive integer}\}$
 $R = \{x \mid x \text{ is a negative integer}\}$
- Suggest appropriate universal sets for the following sets:
 - $\{21, 23, 25, 27, 29\}$
 - $\{41, 43, 47, 53, 59\}$
 - $\{\dots, -14, -13, -12, -11, -10\}$
- Classify the following as True or False:
 - If $n(A) = n(B)$, then A and B are equal sets.
 - If $n(A) = n(B)$, then A and B are equivalent sets.
 - If $A = \{x : x + 5 = 5\}$, then A is an empty set.

