

A.A.29: Set Theory 2: Use set-builder notation and/or interval notation to illustrate the elements of a set, given the elements in roster form

- 1 Which interval notation represents the set of all numbers from 2 through 7, inclusive?
- 2 Which interval notation represents the set of all numbers greater than or equal to 5 and less than 12?
- 3 In interval notation, the set of all real numbers greater than -6 and less than or equal to 14 is represented by
- 4 Which interval notation represents the set of all real numbers greater than 2 and less than or equal to 20?
- 5 Which interval notation represents $-3 \leq x \leq 3$?
- 6 The inequality $-2 \leq x \leq 3$ can be written as
 - 1) $(-2, 3)$
 - 2) $[-2, 3)$
 - 3) $(-2, 3]$
 - 4) $[-2, 3]$
- 7 Which notation is equivalent to the inequality $-3 < x \leq 7$?
 - 1) $[-3, 7]$
 - 2) $(-3, 7]$
 - 3) $[-3, 7)$
 - 4) $(-3, 7)$
- 8 Which set of integers is included in $(-1, 3]$?
- 9 The set of integers in $[6, 10)$ can be written as
- 10 Which interval notation describes the set $S = \{x | 1 \leq x < 10\}$?
- 11 Which set-builder notation describes $\{-3, -2, -1, 0, 1, 2\}$?
- 12 Written in set-builder notation, $S = \{1, 3, 5, 7, 9\}$ is
- 13 Which set builder notation describes $\{-2, -1, 0, 1, 2, 3\}$?
- 14 The set $\{1, 2, 3, 4\}$ is equivalent to
 - 1) $\{x | 1 < x < 4, \text{ where } x \text{ is a whole number}\}$
 - 2) $\{x | 0 < x < 4, \text{ where } x \text{ is a whole number}\}$
 - 3) $\{x | 0 < x \leq 4, \text{ where } x \text{ is a whole number}\}$
 - 4) $\{x | 1 < x \leq 4, \text{ where } x \text{ is a whole number}\}$
- 15 The set $\{11, 12\}$ is equivalent to
 - 1) $\{x | 11 < x < 12, \text{ where } x \text{ is an integer}\}$
 - 2) $\{x | 11 < x \leq 12, \text{ where } x \text{ is an integer}\}$
 - 3) $\{x | 10 \leq x < 12, \text{ where } x \text{ is an integer}\}$
 - 4) $\{x | 10 < x \leq 12, \text{ where } x \text{ is an integer}\}$
- 16 Which notation describes $\{1, 2, 3\}$?
 - 1) $\{x | 1 \leq x < 3, \text{ where } x \text{ is an integer}\}$
 - 2) $\{x | 0 < x \leq 3, \text{ where } x \text{ is an integer}\}$
 - 3) $\{x | 1 < x < 3, \text{ where } x \text{ is an integer}\}$
 - 4) $\{x | 0 \leq x \leq 3, \text{ where } x \text{ is an integer}\}$

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Answer Section

1 ANS:
[2, 7]

REF: fall0704ia

2 ANS:
[5, 12)

REF: 061021ia

3 ANS:
(-6, 14]

REF: 081117ia

4 ANS:
(2, 20]

REF: 011119ia

5 ANS:
[-3, 3]

REF: 061310ia

6 ANS: 4 REF: 011318ia

7 ANS: 2 REF: 061411ia

8 ANS:
{0, 1, 2, 3}

REF: 081430ia

9 ANS:
{6, 7, 8, 9}

REF: 061529ia

10 ANS:
[1, 10)

REF: 061217ia

11 ANS:
 $\{x \mid -3 \leq x \leq 2, \text{ where } x \text{ is an integer}\}$

REF: 081022ia

12 ANS:
 $\{x \mid 1 \leq x \leq 9, \text{ where } x \text{ is an odd integer}\}$

REF: 081321ia

13 ANS:
 $\{x | -2 \leq x < 4, \text{ where } x \text{ is an integer}\}$

REF: 011222ia

14 ANS: 3 REF: 010917ia

15 ANS: 4 REF: 060930ia

16 ANS: 2 REF: 061128ia