Name: _____

S.CP.A.1: Set Theory 3b

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 Which interval notation represents the set of all real numbers greater than 2 and less than or equal to 20?

4 In interval notation, the set of all real numbers greater than −6 and less than or equal to 14 is represented by

5 Which interval notation describes the set $S = \{x \mid 1 \le x < 10\}$?

6 Which interval notation describes the set $S = \{x \mid -5 < x \le 6\}$?

7 Which interval notation represents $-3 \le x \le 3$?

8 The inequality $-2 \le x \le 3$ can be written as
1) $(-2, 3)$
2) $[-2, 3)$
3) $(-2, 3]$
4) $[-2, 3]$

9 Which notation is equivalent to the inequality $-3 < x \le 7$?
1) $[-3, 7]$
2) $(-3, 7]$
3) $[-3, 7)$
4) $(-3, 7)$

10 Which set of integers is included in $(-1, 3]$?
1) $\{0, 1, 2, 3\}$
2) $\{-1, 0, 1, 2\}$
3) $\{-1, 0, 1, 2, 3, 4\}$
4) $\{-2, -1, 0, 1, 2, 3\}$

11 The set of integers in $[6, 10)$ can be written as
1) $\{6, 7, 8, 9, 10\}$
2) $\{7, 8, 9, 10\}$
3) $\{6, 7, 8, 9\}$
4) $\{7, 8, 9\}$

12 Which set-builder notation describes $\{-3, -2, -1, 0, 1, 2\}$?

13 Which set builder notation describes $\{-2,-1,0,1,2,3\}$?

14 Written in set-builder notation, $S = \{1,3,5,7,9\}$ is

15 The set $\{1,2,3,4\}$ is equivalent to
1) $\{x \mid 1 < x < 4$, where x is a whole number$\}$
2) $\{x \mid 0 < x < 4$, where x is a whole number$\}$
3) $\{x \mid 0 < x \leq 4$, where x is a whole number$\}$
4) $\{x \mid 1 < x \leq 4$, where x is a whole number$\}$

16 The set $\{11,12\}$ is equivalent to
1) $\{x \mid 11 < x < 12$, where x is an integer$\}$
2) $\{x \mid 11 < x \leq 12$, where x is an integer$\}$
3) $\{x \mid 10 \leq x < 12$, where x is an integer$\}$
4) $\{x \mid 10 < x \leq 12$, where x is an integer$\}$

17 Which notation describes $\{1,2,3\}$?
1) $\{x \mid 1 \leq x < 3$, where x is an integer$\}$
2) $\{x \mid 0 < x \leq 3$, where x is an integer$\}$
3) $\{x \mid 1 < x < 3$, where x is an integer$\}$
4) $\{x \mid 0 \leq x \leq 3$, where x is an integer$\}$

S.CP.A.1: Set Theory 3b
Answer Section

1 ANS:
$[2,7]$

REF: fall0704ia

2 ANS:
$[5,12)$

REF: 061021ia

3 ANS:
$(2,20]$

REF: 011119ia

4 ANS:
$(-6,14]$

REF: 081117ia

5 ANS:
$[1,10)$

REF: 061217ia

6 ANS:
$(-5,6]$

REF: 061620ia

7 ANS:
$[-3,3]$

REF: 061310ia

8 ANS: 4 REF: 011318ia

9 ANS: 2 REF: 061411ia

10 ANS: 1 REF: 081430ia

11 ANS: 3 REF: 061529ia

12 ANS:
$\{x \mid -3 \le x \le 2,$ where x is an integer$\}$

REF: 081022ia

13 ANS:
$\{x \mid -2 \le x < 4,$ where x is an integer$\}$

REF: 011222ia

14 ANS:
$\{x \mid 1 \le x \le 9,$ where x is an odd integer$\}$

REF: 081321ia

15 ANS: 3 REF: 010917ia

16 ANS: 4 REF: 060930ia
17 ANS: 2 REF: 061128ia