A.A.31: Set Theory 2: Find the intersection of sets (no more than three sets) and/or union of sets (no more than three sets)

1 Given: $M = \{\text{green, red, yellow, black}\}$
$N = \{\text{blue, green, yellow}\}$
Which set represents $M \cup N$?

2 Given: $A = \{2, 4, 5, 7, 8\}$
$B = \{3, 5, 8, 9\}$
What is $A \cup B$?

3 Given: $A = \{3, 6, 9, 12, 15\}$
$B = \{2, 4, 6, 8, 10, 12\}$
What is the union of sets A and B?

4 If $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$ and $B = \{2, 4, 6, 8, 10, 12\}$, the intersection of sets A and B is

5 If $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$ and $B = \{2, 4, 6, 8, 10, 12\}$, then the intersection of these two sets is

6 Given:
Set $A = \{(-2, -1), (-1, 0), (1, 8)\}$
Set $B = \{(-3, -4), (-2, -1), (-1, 2), (1, 8)\}$.
What is the intersection of sets A and B?

7 Given: $R = \{1, 2, 3, 4\}$
$A = \{0, 2, 4, 6\}$
$P = \{1, 3, 5, 7\}$
What is $R \cap P$?

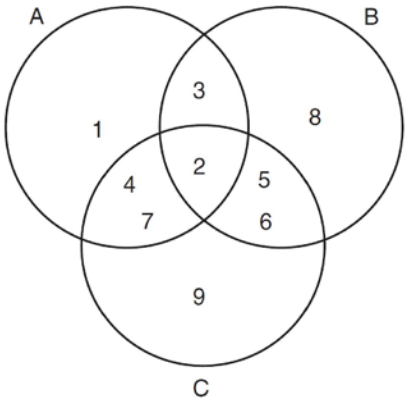
8 Given: $Q = \{0, 2, 4, 6\}$
$W = \{0, 1, 2, 3\}$
$Z = \{1, 2, 3, 4\}$
What is the intersection of sets Q, W, and Z?

9 Given: $X = \{1, 2, 3, 4\}$
$Y = \{2, 3, 4, 5\}$
$Z = \{3, 4, 5, 6\}$
What is the intersection of sets X, Y, and Z?

10 Given the following:
$A = \{\text{Charles, Kyle, Nakim, Jade}\}$
$B = \{\text{Charles, Jade, Alicia, Kyle}\}$
$C = \{\text{Kyle, Nakim, Jade, Dylan}\}$
What is the intersection of sets A, B, and C?

11 If $A = \{0, 1, 3, 4, 6, 7)$, $B = \{0, 2, 3, 5, 6)$, and $C = \{0, 1, 4, 6, 7)$, then $A \cap B \cap C$ is

12 Which set represents the intersection of sets A, *B,* and C shown in the diagram below?



13 Given: $A = \{1, 3, 5, 7, 9\}$

$B = \{2, 4, 6, 8, 10\}$

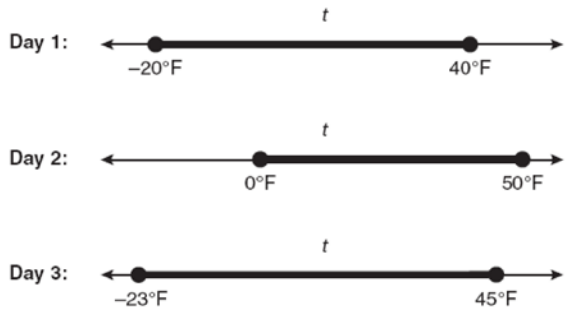
$C = \{2, 3, 5, 7\}$

$D = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

What statement is *false*?

1) $A \cup B \cup C = D$
2) $A \cap B \cap C = \{\}$
3) $A \cup C = \{1, 2, 3, 5, 7\}$
4) $A \cap C = \{3, 5, 7\}$

14 Maureen tracks the range of outdoor temperatures over three days. She records the following information.



Express the intersection of the three sets as an inequality in terms of temperature, *t*.

A.A.31: Set Theory 2: Find the intersection of sets (no more than three sets) and/or union of sets (no more than three sets)
Answer Section

1 ANS:
{green, red, yellow, blue, black}

REF: 061426ia

2 ANS:
$\{2, 3, 4, 5, 7, 8, 9\}$

REF: 011225ia

3 ANS:
$\{2, 3, 4, 6, 8, 9, 10, 12, 15\}$

REF: 061123ia

4 ANS:
$\{2, 4, 6, 8\}$

REF: 011501ia

5 ANS:
$\{2, 4, 6, 8\}$

REF: 061501ia

6 ANS:
$\{(-2, -1), (1, 8)\}$

REF: fall0710ia

7 ANS:
$\{1, 3\}$

REF: 061324ia

8 ANS:
$\{2\}$

REF: 011004ia

9 ANS:
$\{3, 4\}$

REF: 011101ia

10 ANS:
{Jade, Kyle}

REF: 081408ia

11 ANS:
$\{0, 6\}$

REF: 061208ia

12 ANS:
$\{2\}$

REF: 081003ia

13 ANS: 3
$A \cup C = \{1, 2, 3, 5, 7, 9\}$

REF: 081221ia

14 ANS:
$0 \le t \le 40$

REF: 060833ia