AGLOA
On-Sets®
Practice Judges Test
2017-18

Instructions

1. During the test, you may use a **variation sheet** for each division you are testing for but no other notes or printed materials.

2. If you wish, you may use a standard 16-card **On-Sets deck**.

3. You may do any **scratch work** and answer on these pages. For the real test, you will answer on a separate Scantron-type answer sheet.

4. You may take as much **time** as you need to complete this test.

Depending on which division(s) you wish to qualify for, you will answer certain sections of the test as indicated in the following table.

| Divisions	No. of Questions	Which Questions
Elementary	20	#1-20
Middle	31	#1-31
Junior	35	#1-35
Senior	40	#1-40

Signature of Test Taker _____

All Divisions answer questions 1-20.

1. What is the *maximum* number of cards that may be dealt in Elementary, Middle, and Junior Divisions?

A. 8   **B.** 10   **C.** 12   **D.** 14

2. Which Goal is *illegal* for any Universe?

A. | 2 | 2 | **B.** | 2 | 1 | over | 2 | **C.** | 3 | over | 2 | 1 | **D.** | 4 | over | 2 |

3. Which Goal equals **8**?

A. | 4 | over | 2 | **B.** | 2 | over | 2 | 2 | **C.** | 3 | over | 2 | 2 | **D.** | 2 | 4 |

4. Which set does *not* equal B'?

A. B' – B   **B.** B' – ($\underline{V}$ ∪ B)   **C.** B' ∪ ($\underline{\wedge}$ – G)   **D.** $\underline{V}$ – (B $\underline{\cap}$ B)

5. Which set equals $\underline{V}$ for any Universe?

A. $\underline{V}$ ∪ B   **B.** B – $\underline{V}$ **C.** $\underline{\wedge}$''   **D.** B $\underline{\cap}$ $\underline{V}$

6. Which Set-Name equals a Goal of **0** for any Universe?

A. (B $\underline{\cap}$ R) – $\underline{\wedge}$ **B.** G – (G' $\underline{\cup}$ G)   **C.** (Y $\underline{\cap}$ Y') ∪ R   **D.** $\underline{V}$ – (B $\underline{\cap}$ B)

7. Two players begin a match. The third player arrives late and joins the other two for the second shake. What does the third player score for the first shake?

A. 2   **B.** 0   **C.** -2   **D.** -4
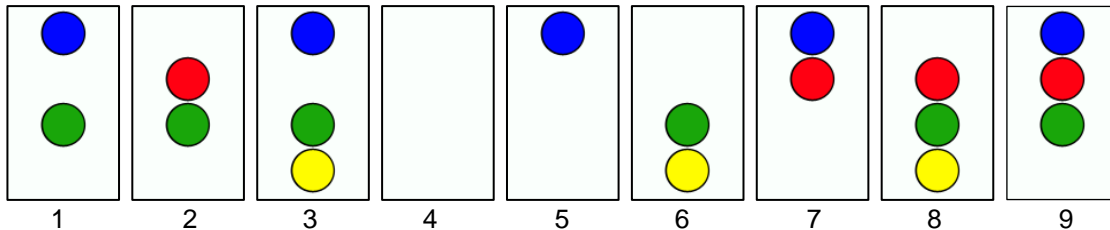
──── *Exercises **8-12** refer to the Universe above.*

8. How many cards are in the set R' $\underline{\cup}$ G?

A. 3   **B.** 5   **C.** 7   **D.** 8

9. How many cards are in the set G' – R?

A. 1   **B.** 2   **C.** 3   **D.** 4

10. How many cards are in the set (G $\underline{\cap}$ Y) – $\underline{\wedge}$?

A. 0   **B.** 2   **C.** 3   **D.** 5

11. Which set contains **3** cards?

A. G $\underline{\cup}$ Y   **B.** (G $\underline{\cap}$ Y) $\underline{\cup}$ $\underline{V}$ **C.** R' – G   **D.** B – R

12. How many cards are in the set Y – (R – B)?

A. 2   **B.** 3   **C.** 4   **D.** 5

13. Which Set-Name is ambiguous?

    A. $Y \cup G \cup R$ **B.** $G \cup B \cap \wedge$ **C.** $R - G'$ **D.** $G \cap R - Y$

14. Which statement is *true*?

    A. The person to the right of the Goal-setter may not deal the cards until after the Goal-setter has rolled the cubes.

    B. The Goal-setter may move a digit cube to the Goal section of the mat, then return the cube to Resources and declare "No Goal."

    C. The player to the *left* of the Goal-setter makes the first move after the Goal is set.

    D. The Goal-setter may not make a Bonus move to Forbidden before setting the Goal even if not leading in the match.

15. After a Now challenge, which Solution correctly uses the cubes on the playing mat at the right?

RESOURCES: $\wedge$ – R Y $\underline{V}$		
FORBIDDEN	PERMITTED	REQUIRED
B $\underline{V}$	G	– R B
Y G	$\cap$	$\underline{\cup}$

    A. $(B - R) \underline{\cup} (Y \cap R)$ **B.** $R \cup B - (\wedge - G)$

    C. $\underline{V} - [(G \underline{\cup} Y) \cap B]$ **D.** $(B \underline{\cup} R) - (\underline{V} \cap G)$

16. To prove that $(G - Y) \cap R' \underline{\cup} \wedge \cap B$ does not equal the Goal, which is *not* an acceptable way for an opponent to place grouping symbols in the Solution?

    A. $(G - Y) \cap [R' \underline{\cup} (\wedge \cap B)]$ **B.** $(G - Y) \cap (R' \underline{\cup} \wedge) \cap B$

    C. $[(G - Y) \cap R]' \underline{\cup} (\wedge \cap B)$ **D.** $(G - Y) \cap [(R' \underline{\cup} \wedge) \cap B]$

17. Which set contains the same cards as $Y - G$ for any Universe?

    A. $(Y \cap G)'$ **B.** $(G - Y) - \wedge$ **C.** $Y' \cap G$ **D.** $Y \cap G' \cap \underline{V}$

18. Which statement is *true* about variations?

    A. With Multiple Operations, any operation cube in Resources when an Impossible challenge is made may be used more than once in a Solution.

    B. "$\underline{V}$ required" is always an illegal variation selection.

    C. After – Required is chosen, a player choosing – wild for that shake is penalized a point.

    D. With $\underline{\cup}$ and $\cap$ interchangeable, two $\underline{\cup}$ cubes in a Solution must both be $\underline{\cup}$ or both be $\cap$.

19. Suppose B wild, Two operations, and Multiple Operations are in effect for the shake. Which Set-Name does *not* satisfy these variations?

    A. $(R \cap G) \underline{\cup} \underline{V}$ **B.** $G \cap Y'$ **C.** $\underline{V} - R'$ **D.** $R' \cap R'$

        ↑   ↑   ↑   ↑   ↑   ↑

      same B   B   B   same B

20. What must a Solution-writer indicate in *writing*?

    A. What each $\underline{\cup}$ or $\cap$ represents for the $\underline{\cup}$ and $\cap$ Interchangeable variation

    B. Which operation cubes are used multiple times if Multiple Operations is in effect

    C. The value of the Goal

    D. What each R cube represents if R is wild and R represents a symbol other than R

Elementary Division candidates stop here.

Middle, Junior, and Senior Divisions continue on the next page.

The remaining questions are for Middle, Junior, and Senior Divisions.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
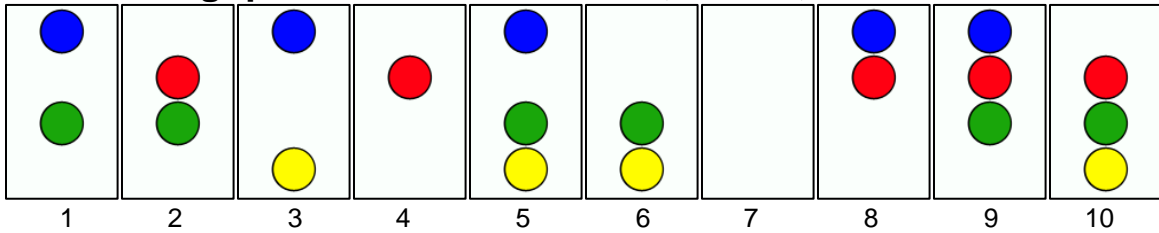
*Exercises **21-24** refer to the Universe above.*

21. Which cards are removed by the Restriction G' $\underline{C}$ R?
   A. 3, 7   **B.** 4, 8   **C.** 2, 3, 7, 9, 10   **D.** 3, 4, 7, 8

22. Which card or cards are removed by the Restriction R $\cup\wedge$ = Y?
   A. 3, 5, 6   **B.** 2, 3, 4, 5, 6, 8, 9   **C.** 10   **D.** 2, 4, 8, 9

23. The Solution at the right is correct if the Goal equals what number?

   R $\underline{C}$ B $\cap$ Y
   (B $\cup$ B)' $\cap$ Y

   A. 0   **B.** 1   **C.** 2   **D.** 3

24. Which cards are removed by this chain Restriction? Y = $\underline{V}$ $\underline{C}$ R $\cup$ B
   A. 1, 2, 4, 7, 8, 9   **B.** 6, 7   **C.** 1, 2, 4, 6, 7, 8, 9   **D.** All ten cards

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25. Which is a null Restriction for any Universe?
   A. $\wedge$ $\underline{C}$ B   **B.** Y = $\underline{V}$ **C.** G $\underline{C}$ G $\cap$ Y   **D.** R $\underline{C}$ R'

26. Which Restriction removes just the B cards from any Universe?
   A. B' = B   **B.** B = $\underline{V}$ **C.** G $\cup$ Y $\underline{C}$ B   **D.** B $\underline{C}$ B' $\cap$ $\underline{V}$

27. Which Restriction is incorrect because of faulty parentheses?
   A. (R $\cap$ B) = Y   **B.** B $\underline{C}$ B = (R $\cup$ G)'   **C.** (Y – R)' $\underline{C}$ G   **D.** (Y = B)'

28. Which Solution equals a Goal of **0** for any Universe?
   A. R' $\underline{C}$ B $\cup$ $\wedge$ **B.** G – Y = $\underline{V}$ **C.** $\underline{V}$ $\underline{C}$ R – B'   **D.** $\wedge$ $\underline{C}$ R $\cap$ G'
       R' – B' $\cup$ $\wedge$ (Y – G) $\cap$ $\underline{V}$ R – B'   R $\cap$ G'

29. The Restriction G' = B removes the same cards from the Universe as all these Restrictions *except* which one?
   A. G = B'   **B.** G $\underline{C}$ B'   **C.** G $\underline{C}$ B' $\underline{C}$ G   **D.** B' $\underline{C}$ G $\underline{C}$ B'

30. Which Restriction removes *all* the cards from any Universe?
   A. $\underline{V}$ $\underline{C}$ Y $\cup$ Y'   **B.** $\wedge$ $\underline{C}$ B $\cap$ B'   **C.** R = R' – $\wedge$ **D.** G $\cup$ R $\cup$ B $\cup$ Y = $\underline{V}$'

31. With Absolute Value, which of these Goals may equal 8?

   I. $\frac{3}{13}$ **II.** $\frac{\varepsilon}{22}$ **III.** 3ε2

   A. **I** and **II** only   **B.** **I**, **II**, and **III**   **C.** **I** and **III** only   **D.** **II** and **III** only

Middle Division candidates stop here.

Junior and Senior Divisions continue on the next page.
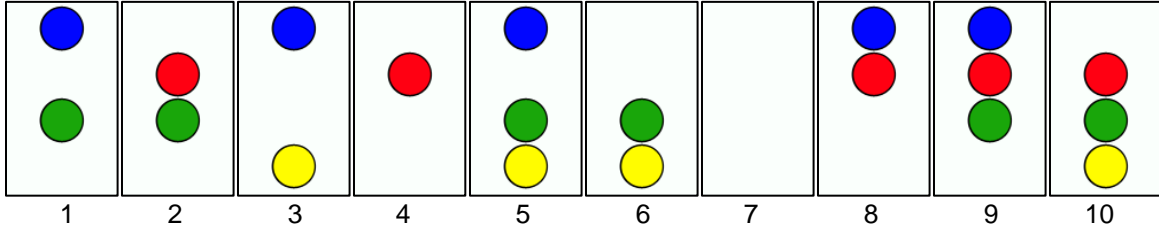
*Exercises **32-34** refer to the Universe above.*

32. Suppose the Double B variation is in effect for the Universe above. How many cards are in the set R $\cup$ Y'?

A. 12 　　　　　 **B.** 10 　　　　　 **C.** 8 　　　　　 **D.** 6

33. Suppose Blank Card Wild is in force. The following Solution equals a Goal of **2** if what colors are placed on the blank card?

$$(G \cap Y) - R'' = \underline{V}$$
$$(G \cap Y) - B$$

A. R and Y only 　　　 **B.** G and Y only 　　 **C.** G and B only 　　　 **D.** G and R only

34. If the BG card is required, which Solution is correct for a Goal of **3**?

A. R $\underline{C}$ G $\cup$ B 　　　 **B.** B $\underline{C}$ G – R 　　　 **C.** G'' $\cup$ B = $\underline{V}$ 　　　 **D.** B $\underline{C}$ R $\cap$ R
　　 (G $\cup$ B) – R 　　　　　 R – B 　　　　　　 (G $\cap$ B) – $\underline{V}$' 　　　　 (R $\cap$ R) – B

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35. Which statement is *false*?

A. If Blank Card Wild is chosen for the shake, the blank card may be made a duplicate of another card in the Universe.

B. If Blank Card Wild and blank card required are both in effect, the blank card may be used in a Solution with one or more colors on it.

C. Double B $\underline{U}$ B' is an illegal variation selection.

D. If Shift from Permitted is in effect, a player may shift an = or $\underline{C}$ cube from Permitted to Forbidden.

Junior Division candidates stop here.

Senior Division continues on the next page.

The remaining questions are for Senior Division only.
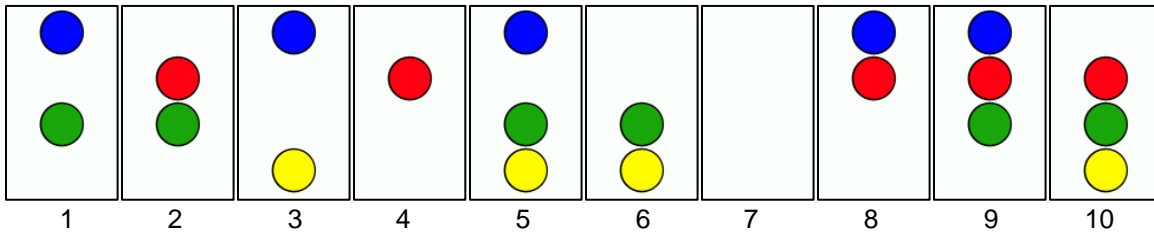
Exercises 36 and 37 refer to the Universe above.

36. Suppose – means symmetric difference. How many cards are in the set B – G?

    A. 3   **B.** 4   **C.** 5   **D.** 6

37. Suppose the Goal-setter selects Symmetric Difference and a subsequent player chooses double G – B'. How many cards are in the set R – (G – Y)?

    A. 5   **B.** 6   **C.** 7   **D.** 8

38. If – means symmetric difference, which statement is *true*?

    A. G – R' is the same set as G' – R.
    B. R – V̲ is the same set as ∧̲.
    C. Y – Y' is the same set as Y.
    D. G – ∧̲ is the same set as G'.

39. What is the *minimum* number of cards that must be dealt in Senior Division?

    A. 6   **B.** 8   **C.** 10   **D.** 12

40. With Two Solutions, which of these are *true* statements?

    I. An Impossible challenge against a Goal of 0 will be correct.
    II. After a Now challenge, a Solution-writer may use a B cube from Resources in one Solution and no cube from Resources in the other Solution.
    III. If G is wild, G cubes in one Solution may represent R while G cubes in the other Solution represent V̲.

    A. **I**, **II**, and **III**   **B.** **II** only   **C.** **I** only   **D.** **I** and **II** only