Ordering Game 1

There are five people—Bugsy, Nelson, Dutch, Clyde, and Gotti—in a police line-up standing in spaces numbered 1 through 6, from left to right. The following conditions apply:

There is always one empty space.
Clyde is not standing in space 1, 3, or 5.
Gotti is the third person from the left.
Bugsy is standing to the immediate left of Nelson.

1. Nelson CANNOT stand in which one of the following spaces?

   (A) 2
   (B) 3
   (C) 4
   (D) 5
   (E) 6

2. Which one of the following is a possible ordering of the 5 people from left to right?

   (A) Clyde, empty, Dutch, Gotti, Bugsy, Nelson
   (B) Bugsy, Clyde, Nelson, Gotti, Dutch, empty
   (C) Dutch, Bugsy, Gotti, Nelson, empty, Clyde
   (D) Dutch, Clyde, Gotti, empty, Nelson, Bugsy
   (E) Bugsy, Nelson, Gotti, Clyde, Dutch, empty

3. If space 6 is empty, which one of the following must be false?

   (A) Clyde stands in space 4.
   (B) Dutch stands in space 4.
   (C) Clyde is to the left of Nelson.
   (D) Clyde is to the right of Dutch.
   (E) Nelson stands in space 2.

4. Which one of the following spaces CANNOT be empty?

   (A) 1
   (B) 2
   (C) 3
   (D) 4
   (E) 5

5. If Clyde stands in space 6, Dutch must stand in space

   (A) 3 or 4
   (B) 5 or 6
   (C) 1 or 2
   (D) 2 or 3
   (E) 4 or 5

Ordering Game 2

On Auto Row there are seven dealerships: Audi, Chrysler, Ford, Hyundai, Mazda, Toyota, Volkswagen. All the dealerships are on the same side of the street, which runs from west to east.

Ford is not next to Mazda.
Audi is the fourth dealership from the west end of the street.
Ford is next to Audi.
Toyota is west of both Audi and Ford but east of Chrysler.

6. Which one of the following dealerships CANNOT be next to Chrysler?

(A) Toyota
(B) Ford
(C) Volkswagen
(D) Hyundai
(E) Mazda

7. If Ford is east of Audi, then Hyundai CANNOT be next to both

(A) Toyota and Ford
(B) Chrysler and Toyota
(C) Ford and Mazda
(D) Ford and Volkswagen
(E) Toyota and Audi

8. If Volkswagen is west of Audi, then which one of the following must be false?

(A) Ford is east of Audi.
(B) Volkswagen is west of Toyota.
(C) Volkswagen is east of Toyota.
(D) Hyundai is west of Mazda.
(E) Hyundai is east of Mazda.

9. Which one of the following is a possible arrangement of the dealerships from west to east?

(A) C, F, T, A, H, M, V
(B) C, T, F, H, A, M, V
(C) V, C, T, A, F, M, H
(D) C, V, F, A, H, T, M
(E) H, C, T, A, F, V, M

10. If Hyundai is west of Ford, which one of the following pairs of dealerships must be next to each other?

(A) Chrysler and Hyundai
(B) Volkswagen and Mazda
(C) Ford and Mazda
(D) Toyota and Audi
(E) Hyundai and Mazda

11. If the Volkswagen dealership is on the east end of the street, then which one of the following must be false?

(A) Chrysler is second from the west end of the street.
(B) Ford is east of Audi.
(C) Hyundai is on the west end of the street.
(D) Ford is west of Audi.
(E) Hyundai is fifth from the west end of the street.

Ordering Game 3

Seven children are to be seated in seven chairs arranged in a row that runs from west to east. All seven children will face north. Four of the children are boys: Frank, Harry, Ivan, and Joel. Three are girls: Ruby, Sylvia, and Thelma. The children are assigned to chairs according to the following conditions:

Exactly one child sits in each chair.
No boy sits next to another boy.
Ivan sits next to and east of the fourth child in the row.
Sylvia sits east of Ivan.
Frank sits next to Ruby.

12. What is the maximum possible number of different pairs of chairs in which Frank and Ruby could sit?

(A) one
(B) two
(C) three
(D) four
(E) five

13. Which one of the following statements must be false?

(A) Both Harry and Joel sit east of Frank.
(B) Both Harry and Ruby sit east of Frank.
(C) Both Harry and Joel sit west of Frank.
(D) Both Harry and Ruby sit west of Frank.
(E) Both Joel and Ruby sit east of Frank.

14. If Thelma sits next to Ivan, and if Frank sits next to Thelma, which one of the following statements could be false?

(A) Both Frank and Ivan sit east of Ruby.
(B) Both Frank and Ruby sit west of Thelma.
(C) Both Frank and Sylvia sit east of Ruby.
(D) Both Frank and Thelma sit west of Sylvia.
(E) Both Frank and Ruby sit west of Joel.

15. If Frank does not sit next to any child who sits next to Ivan, which one of the following statements could be true?

(A) Harry sits west of Frank.
(B) Joel sits west of Ivan.
(C) Ruby sits west of Frank.
(D) Thelma sits west of Frank.
(E) Thelma sits west of Ruby.

16. If Frank sits east of Ruby, which one of the following pairs of children CANNOT sit next to each other?

(A) Frank and Thelma
(B) Harry and Ruby
(C) Harry and Sylvia
(D) Ivan and Ruby
(E) Joel and Ruby

Ordering Game 4

The Mom & Pop liquor store employs five cashiers—Adams, Bates, Cox, Drake, and Edwards—each of whom works alone on exactly one day, Monday through Friday.

Adams works only Mondays or Wednesdays.
Bates will not work Wednesdays or Fridays.
Drake and Edwards work on consecutive days.

17. Which one of the following is a possible work schedule?

    (A) Edwards, Bates, Adams, Drake, Cox
    (B) Bates, Adams, Cox, Edwards, Drake
    (C) Edwards, Drake, Adams, Cox, Bates
    (D) Adams, Bates, Edwards, Cox, Drake
    (E) Drake, Edwards, Adams, Bates, Cox

18. If Cox works on Tuesday, then all of the following statements must be true EXCEPT:

    (A) Bates works on Monday.
    (B) Adams works on Wednesday.
    (C) Drake could work on Thursday.
    (D) Edwards could work on Friday.
    (E) Drake could work on Wednesday.

19. Which one of the following CANNOT be true?

    (A) Cox works on Thursday.
    (B) Edwards works on Monday.
    (C) Adams and Bates work on consecutive days.
    (D) Drake and Edwards work on consecutive days.
    (E) Cox works on Monday.

20. If Bates works Thursday, which one of the following must be true?

    (A) Adams works Wednesday.
    (B) Drake works Tuesday.
    (C) Cox works Friday.
    (D) Edwards works Wednesday.
    (E) Adams works Monday.

21. If Adams and Bates CANNOT work on consecutive days, then which one of the following must be false?

    (A) Cox works Tuesday.
    (B) Edwards works Monday.
    (C) Drake works Tuesday.
    (D) Edwards works Wednesday.
    (E) Adams works Monday.

22. If Bates CANNOT work either immediately before or after Edwards, then which one of the following must be false?

    (A) Edwards works on Monday.
    (B) Edwards works on Tuesday.
    (C) Edwards works on Wednesday.
    (D) Edwards works on Thursday.
    (E) Edwards works on Friday

Ordering Game 5

There are 6 books on a shelf: Math, History, Zoology, Physics, Art, and Chemistry. The books are numbers 1 to 6 from left to right.

The zoology book is not next to the math book

The math book and the history book are exactly two spaces apart

At most one other book separates the art book from the chemistry book

The physics book cannot be on either end of the shelf

23. If the math book is second from the left, then in which one of the following positions could the art book be located?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6

24. The books located in positions 1, 2, and 3, respectively, could be

I. chemistry, math, and art
II. zoology, art, and math
III. art, chemistry, and history

(A) I only
(B) II only
(C) III only
(D) I and II only
(E) I, II, and III

25. What is the highest numbered position in which the history book can be located, if the zoology and math books are both to the right of it?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

26. Which one of the following is a possible arrangement of the six books on the shelf, from left to right?

(A) art, chemistry, physics, history, zoology, math
(B) history, art, math, chemistry, zoology, physics
(C) zoology, history, art, math, physics, chemistry
(D) zoology, chemistry, history, physics, math, art
(E) art, chemistry, math, physics, history, zoology

27. If the physics book is in position 3, then which one of the following must be true?

(A) The chemistry book is in position 6.
(B) The zoology book is in position 1.
(C) The art book is in position 1.
(D) The math book is in position 6.
(E) The zoology book is in position 2.

28. If the history and the math books are both to the left of the chemistry book, then which one of the following must be false?

(A) The art book is in position 3.
(B) The zoology book is in position 4.
(C) The history book is in position 2.
(D) The art book is in position 5.
(E) The chemistry book is in position 6.

Ordering Game 6

Seven disks—G, H, L, O, P, S, U—are being inserted in a CD player. The order in which the disks are played is subject to the following restrictions:

L must be played before both O and U.
Exactly two disks must be played between G and P one of which must be L.
H cannot be played first.

29. If G is played third, which one of the following must be played second?

(A) G
(B) H
(C) L
(D) O
(E) P

30. If L and O are played consecutively, which one of the following cannot be true?

(A) S is played second
(B) G is played second
(C) L is played third
(D) O is played forth
(E) H is played sixth

31. What is the maximum number of disks that can separate S from U?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

32. If S is played second, which one of the following cannot be true?

(A) G is played sixth
(B) L is played third
(C) U is played seventh
(D) U is played fifth
(E) H is played fifth

Ordering Game 7

Seven children are to be seated in seven chairs arranged in a row that runs from west to east. All seven children will face north. Four of the children are boys: Frank, Harry, Ivan, and Joel. Three are girls: Ruby, Sylvia, and Thelma. The children are assigned to chairs according to the following conditions:

Exactly one child sits in each chair.
No boy sits next to another boy.
Ivan sits next to and east of the fourth child in the row.
Sylvia sits east of Ivan.
Frank sits next to Ruby.

33. What is the maximum possible number of different pairs of chairs in which Frank and Ruby could sit?

(A) one
(B) two
(C) three
(D) four
(E) five

34. Which one of the following statements must be false?

(A) Both Harry and Joel sit east of Frank.
(B) Both Harry and Ruby sit east of Frank.
(C) Both Harry and Joel sit west of Frank.
(D) Both Harry and Ruby sit west of Frank.
(E) Both Joel and Ruby sit east of Frank.

35. If Thelma sits next to Ivan, and if Frank sits next to Thelma, which one of the following statements could be false?

(A) Both Frank and Ivan sit east of Ruby.
(B) Both Frank and Ruby sit west of Thelma.
(C) Both Frank and Sylvia sit east of Ruby.
(D) Both Frank and Thelma sit west of Sylvia.
(E) Both Frank and Ruby sit west of Joel.

36. If Frank does not sit next to any child who sits next to Ivan, which one of the following statements could be true?

(A) Harry sits west of Frank.
(B) Joel sits west of Ivan.
(C) Ruby sits west of Frank.
(D) Thelma sits west of Frank.
(E) Thelma sits west of Ruby.

37. If Frank sits east of Ruby, which one of the following pairs of children CANNOT sit next to each other?

(A) Frank and Thelma
(B) Harry and Ruby
(C) Harry and Sylvia
(D) Ivan and Ruby
(E) Joel and Ruby

Ordering Game 8

A gymnastics instructor is planning a weekly schedule, Monday through Friday, of individual coaching sessions for each of six students—H, I, K, O, U, and Z. The instructor will coach exactly one student each day, except for one day when the instructor will coach two students in separate but consecutive sessions. The following restrictions apply:

H's session must take place at some time before Z's session.
I's session is on Thursday.
K's session is always scheduled for the day immediately before or the day immediately after the day for which O's session is scheduled.
Neither Monday nor Wednesday can be a day for which two students are scheduled.

38. Which one of the following is a pair of students whose sessions can both be scheduled for Tuesday, not necessarily in the order given?

(A) H and U
(B) H and Z
(C) K and O
(D) O and U
(E) U and Z

39. If K's session is scheduled for Tuesday, then which one of the following is the earliest day for which Z's session can be scheduled?

(A) Monday
(B) Tuesday
(C) Wednesday
(D) Thursday
(E) Friday

40. Which one of the following must be true?

(A) If U's session is scheduled for Monday, H's session is scheduled for Tuesday.
(B) If U's session is scheduled for Tuesday, O's session is scheduled for Wednesday.
(C) If U's session is scheduled for Wednesday, Z's session is scheduled for Tuesday.
(D) If U's session is scheduled for Thursday, Z's session is scheduled for Friday.
(E) If U's session is scheduled for Friday, Z's session is scheduled for Thursday.

41. Scheduling Z's session for which one of the following days determines the day for which U's session must be scheduled?

(A) Monday
(B) Tuesday
(C) Wednesday
(D) Thursday
(E) Friday

42. If H's session is scheduled as the next session after U's session, which one of the following could be true about H's session and U's session?

(A) U's session is scheduled for Monday, and H's session is scheduled for Tuesday.
(B) U's session is scheduled for Thursday, and H's session is scheduled for Friday.
(C) They are both scheduled for Tuesday.
(D) They are both scheduled for Thursday.
(E) They are both scheduled for Friday.

Ordering Game 9

Seven consecutive time slots for a broadcast, numbered in chronological order 1 through 7, will be filled by six song tapes—G, H, L, O, P, S—and exactly one news tape. Each tape is to be assigned to a different time slot, and no tape is longer than any other tape. The broadcast is subject to the following restrictions:

L must be played immediately before O.
The news tape must be played at some time after L.
There must be exactly two time slots between G and P, regardless of whether G comes before P or whether G comes after P.

43. If G is played second, which one of the following tapes must be played third?
    (A) the news
    (B) H
    (C) L
    (D) O
    (E) S

44. The news tape can be played in any one of the following time slots EXCEPT the
    (A) second
    (B) third
    (C) fourth
    (D) fifth
    (E) sixth

45. If H and S are to be scheduled as far from each other as possible, then the first, the second, and the third time slots could be filled, respectively, by
    (A) G, H, and L
    (B) S, G, and the news
    (C) H, G, and L
    (D) H, L, and O
    (E) L, O, and S

46. If P is played fifth, L must be played
    (A) first
    (B) second
    (C) third
    (D) fourth
    (E) sixth

47. What is the maximum number of tapes that can separate S from the news?
    (A) 1
    (B) 2
    (C) 3
    (D) 4
    (E) 5

48. Which one of the following is the latest time slot in which L can be played?
    (A) the third
    (B) the fourth
    (C) the fifth
    (D) the sixth
    (E) the seventh

49. The time slot in which O must be played is completely determined if G is assigned to which one of the following time slots?
    (A) the first
    (B) the third
    (C) the fourth
    (D) the fifth
    (E) the sixth