

**Analytical Reasoning****Directions**

Each question or group of questions is based on a passage or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question, select the best answer choice given.

**Questions 1 – 7**

Six horses- with the names “Greatness” “Leverage” “Mistletoe,” “Turnabout” “Vigilance” and “Zodiac” are entered in a race. The starting gate is divided into exactly seven starting positions numbered consecutively 1 through 7, seven jockeys – also numbered 1 through 7- are eligible to ride in the race. Each jockey’s number corresponds to the numbered position in the starting gate from which that jockey will not be assigned to any horse, and the starting – gate position corresponding to that Jockey’s number will remain vacant for the race. Jockeys number will remain vacant for the race. Jockeys will be assigned to horses and the horses will runs from starting- gate positions in accordance with the following restrictions.

Either Greatness or Mistletoe must be ridden by Jockey 1.

Vigilance must be ridden by Jockey 4 or else by Jockey 5.

Leverage and Vigilance must have at least one horse separating the two of them in the starting gate.

Mistletoe must run from a starting- gate position with a lower number than the starting- gate position from which Zodiac runs.

- Which of the following could be an accurate list of three horses running from starting- gate positions 1, 2, and 3 respectively?
 

A) Greatness, Turnabout, Vigilance	B) Greatness, Zodiac, Mistletoe,
C) Leverage, Mistletoe, Zodiac	D) Mistletoe, Turnabout, Greatness
E) Mistletoe, Vigilance, Zodiac	
- Which of the following starting – gate positions must have a horse running from it?
 

A) 1	B) 2
C) 3	D) 4
E) 7	
- Leverage could start from any of the following starting – gate positions EXCEPT
 

A) 2	B) 3
C) 4	D) 6
E) 7	
- If Mistletoe runs from starting – gate position 5 and if starting – gate position 6 is vacant: which of the

**Analytical Reasoning**

following must be true?

- A) Greatness starts from starting – gate position 2.
- B) Leverage starts from starting – gate position 7.
- C) Vigilance starts from starting – gate position 3
- D) Turnabout starts from starting-gate position 3.
- E) Zodiac starts from starting – gate position 2.
5. If the horses finish the race, from first to last, in exactly the order 6, 5, 3, 2, 2 and 1 (corresponding to the number of their jockeys), and if Leverage is the horse that wins the race, then each of the following horses could have been among the top three finishers in the race EXCEPT
- A) Greatness
- B) Mistletoe
- C) Turnabout
- D) Vigilance
- E) Zodiac
6. If Jockey 5 is the one jockey not assigned to any horse, which of the following could be true?
- A) Greatness is ridden by Jockey 4.
- B) Leverage is ridden by Jockey 6.
- C) Mistletoe is ridden by Jockey 7.
- D) Turnabout is ridden by Jockey 4.
- E) Zodiac is ridden by Jockey 6.
7. If Turnabout is incapable of running in the race and no replacement horse is found, and if the horses that do run finish the race from first to last, in the order 1, 2, 4, 6 and 7 (corresponding to the numbers of their jockeys). Which of the following must have finished last in the race?
- A) Greatness
- B) Leverage
- C) Mistletoe
- D) Vigilance
- E) Zodiac

**Questions 8- 14**

The curator of a sculpture garden is planning an exhibit. Seven statues – F, G, H, J, R, S and U – are to be exhibited, three on the south lawn four on the north lawn. Four of the statues- F, G, H, and J- are made of steel, and three – R, S, and U – are made of bronze, the curator will satisfy the following requirements in setting up the exhibit:

Each lawn will have at most two bronze statues placed on it.

G cannot be on the same lawn as U.

**Analytical Reasoning**

H cannot be on the same lawn as R.

8. Which of the following groups could be placed on the north lawn?

- A) F, G, H and U  
B) F, H, , S and U  
C) G, H, R, and U  
D) G, J, R, and U  
E) J, R, S, and U

9. If U and R are placed on the north lawn, which of the following groups must be placed on the south lawn?

- A) F, G, and H  
B) F, J, and S  
C) G, H, R, and S  
D) G, H, and U  
E) H, S, and U

10. If S and U are placed on the south lawn, each of the following must be placed on the north lawn EXCEPT

- A) F  
B) G  
C) H  
D) J  
E) R

11. If S and R are placed on the south lawn, which of the following must also be placed on the south lawn?

- A) F  
B) G  
C) H  
D) J  
E) U

12. If G and H are placed on the south lawn, which of the following must also be placed on the south lawn?

- A) F  
B) J  
C) R  
D) S  
E) U

**Analytical Reasoning**

13. If F and G are placed on the north lawn, which of the following groups could be placed on the south lawn?
- A) H, J and S  
B) H, J, and U  
C) H, R, and U  
D) J, S, and U  
E) R, S, and U
14. New employees of Ace Industries are complaining about discomfort caused by excessive noise inside Ace's factory. Experienced Ace factory employees, however, do not suffer any such discomfort. Although Ace accepts responsibility for the health of its employees. It has decided not to issue earplugs to new employees, Ace reasoned that the new employees would also become accustomed to the noise without using earplugs. Which of the following if true indicates a flaw in Ace's decision not to issue earplugs to new employees?
- A) Because the noise in Ace's factory is absorbed by soundproof walls, it cannot be heard by Ace executives in their offices.  
B) Many of the new employees interviewed said they would not wear earplugs on the job.  
C) Issuing earplugs to all new employees would be a less effective method of reducing employees exposure to noise than altering the machinery to be less noisy would be,  
D) The experienced employees lack of discomfort is attributable to hearing loss caused by the factory noise,  
E) The machines in Ace's factory have not become any noisier since the experienced workers were originally hired.

**Questions 15 - 19**

Seven dignitaries – F, G, H, I, N, O, and P- are to be seated together at a diplomatic ceremony. They will be seated in a row of a seven chairs, numbered, from 1 to 7, from front to back. Any seating is acceptable as long as all seven dignitaries are seated; one in each chair and the seating conforms to the following rules.

F must sit in the chair immediately behind O's chair

G cannot sit in the chair immediately in front of

N's chair and G cannot sit in the chair immediately behind N's chair.

There must be exactly two chairs between the chairs of Hand P

There must at least one chair between the chairs of I and P.

N must sit in chair 3.

15. Which of the following seating arrangements. From chair 1 through chair 7, conforms to the rules?
- A) F, I, N, P, G, O, H  
B) G, P, N, I, H, O, F  
C) I, G, N, P, O, F, H  
D) I, H, N, P, O, F, G

## Analytical Reasoning

E) O, F, H, N, I, P, G

16. If F sits in chair 6 and H sits in chair 7, which of the following dignitaries must sit in chair 2?

A) G

B) I

C) N

D) O

E) P

17. If the seating arrangement from chair 1 through chair 7, is G, I, N, H, O, F, P, which of the following pairs of dignitaries can exchange seats without violating the rules?

A) F and G

B) G and H

C) G and I

D) H and P

E) I and P

18. If O sits in chair 1 and H sits in chair 7. then the number of chairs between F's chair and I's chair must be

A) Zero

B) One

C) Two

D) Three

E) Four

19. If H sits in chair 4 and F sits in chair 6, then the dignitaries in chairs 1 and 7, respectively, must be

A) G and O

B) G and P

C) I and P

D) O and I

E) P and O

## Analytical Reasoning

### ANSWERS

1.	D	2.	A	3.	C	4.	D
5.	B	6.	E	7.	B	8.	B
9.	C	10.	C	11.	D	12.	B
13.	D	14.	B	15.	B	16.	D
17.	D	18.	B				