

## Television line-up

This game uses a typical simple-line diagram with a few unusual features. There are nine spaces instead of the typical six or seven spaces. There are only eight members; normally there is the same number of members as there are spaces to fill. In this game, one member will be used twice, which is also unusual for a simple line. The biggest problems are created by Rules 1 and 2; more on that in a moment. All that aside, the puzzle is not too difficult. When diagramming, always start with the easiest rules, the anchors. Here, H is second and ninth. This simplifies the diagram immensely, since you now know that the other members are all used exactly once. Members C, A, and D all have limiting relationships. Combine these rules into a block you can apply to the diagram. Rules 1 and 2 are a little quirky. Rule 1 says that A and B have no more than two spaces between them. Note that A could be before or after B; this is very tricky. The next one is really tricky. Rule 2 says C is followed by one or more episodes before D. What exactly does this mean? It means that if, for example D is on week six, C must be on week four or earlier. This is different from Rule 1, where A and B are separated by (up to) two weeks, that is, zero, one, or two spaces could separate A and B. These unique rules require creative diagramming to capture the variability of the placements. If you are still confused, review Rules 1 and 2 until you understand how they are different. You can always turn to the answer choices for guidance as well. Rule 3 is easy; G is immediately after D. Rule 4 is easy; C is after A. This combination of rules is listed below. (Figure 1) We can make some warranted conclusions at this point. G can never be earlier than sixth. Also, D can never be first, second, third, or eighth. A can never be later than C. Since there is at least one space after C but before the DG block, A can never be later than fourth.

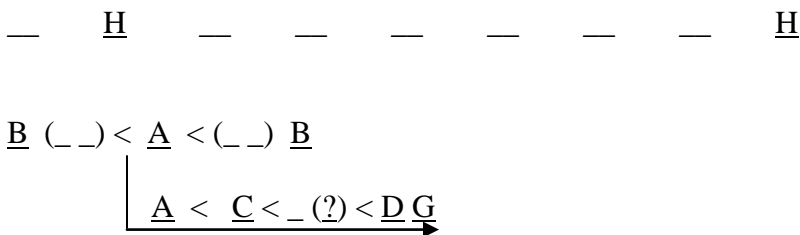


Fig. 1

1. (D) – Usually the first question in the set should be answered by using each rule to eliminate one answer choice. Start with the first rule and check if it is violated in any of the answer choices. Then do the same for each of the other rules.
  - (A) This violates Rule 2, because at least one other episode must be between C and D.
  - (B) This violates Rule 4 because it shows A later than C.
  - (C) This violates Rule 1 and Rule 4.
  - (D) \* This is a valid permutation.
  - (E) This violates Rule 3 because it separates D and G.

2. (D) – Remember, with largest number, or maximum number, questions, always start with the largest number and work down.  
 (A) Always start with the largest number and work down until you find the correct answer.  
 (B) Always start with the largest number and work down until you find the correct answer.  
 (C) Always start with the largest number and work down until you find the correct answer.  
 (D) \* This is possible: B H A C E F D G H.  
 (E) This is impossible because there are not seven spaces between space one and space eight; there are only six spaces. Remember, H occupies space nine, so that space is not available for G or B.
3. (C) – This question requires you to invest some time to find all the possible permutations. When B is first, A can be third or fourth. When C is fifth, the only way to accommodate D and G is to put them seventh and eighth. Solving for A on space three, we find two permutations. (Figure 2) Solving for A on space four, we find two more permutations, again involving E and F, the free agents. Thus, there are four permutations.  
 (A) See the analysis.  
 (B) See the analysis.  
 (C) \* See the analysis.  
 (D) See the analysis.  
 (E) See the analysis.

B    H    A    E/F    C    F/E    D    G    H

B    H    E/F    A    C    F/E    D    G    H

Fig. 2

4. (C) – With F on seven, you know a little bit, but not much. What can be eighth? Not A, B, or C, due to space constraints. Nor can D or G, because of the effect of Rule 3. Thus, only E, the other free agent, can be on space eight. Now things are becoming clearer. You must accommodate the block of C, D, and G. You can put G sixth, D fifth, B fourth, C third, and A first. Can it be done any other way? No. Because of the interplay of all the rules, this is the only permutation that works.  
 (A) See the analysis. If A were third, then there would not be room to accommodate all the other members.  
 (B) See the analysis.  
 (C) \* This must be true.

- (D) E must be eighth.
- (E) G must be sixth.

5. (C) – This question follows a similar line of inquiry as the previous question. Putting G eighth requires D to be seventh. C cannot be sixth. C can be fifth, fourth, or third. (Figure 3) From there you can find several permutations.
- (A) E can be third, but not when F is fourth.
  - (B) E can be fourth, but not when B is fifth.
  - (C) \* C can be third when F is fifth.
  - (D) B can be first, but D must always be seventh because G is eighth.
  - (E) F can be fifth, but D must always be seventh.

—	<u>H</u>	—	—	—	—	<u>D</u>	<u>G</u>	<u>H</u>
A/B	H	E/F	B/A	C	F/E			
A/B	H	B/A	E/F	C	F/E			
E/F	H	F/E	A	C	B			
<b>A</b>	<b>H</b>	<b>C</b>	<b>B</b>	<b>E/F</b>	<b>F/E</b>			

Fig. 3