A cargo ship is carrying exactly four types of cargooil, steel, paper and timber–each of which is going to a different port. The ship stops at each of exactly four ports exactly once–Gulf Shores, Lanesville, Middleton and Newport. The following conditions

hold:

The paper is traveling either to Gulf Shores or to Lanesville.

The cargo ship carries the timber longer than it carries the oil.

If the ship does not stop at Gulf Shores first, it stops at Gulf Shores last.

If the ship is still carrying timber when it reaches Lanesville, then the ship is still carrying steel when it reaches Middleton.

- 1. Which one of the following could be a complete and accurate list of the ports and the cargo discharged thereat, in order from first to last?
- A. Newport: steel Middleton: oil Lanesville: paper Gulf Shores: timber
- B. Gulf Shores: oil Newport: timber Lanesville: steel Middleton: paper
- C. Gulf Shores: paper Newport: steel Lanesville: timber Middleton: oil
- D. Gulf Shores: oil Newport: timber Lanesville: paper Middleton: steel
- E. Newport: oil Gulf Shores: steel Lanesville: timber Middleton: paper

- 2. If the first port the ship stops at is Newport, which one of the following is a complete and accurate list of the cargo which could be discharged there?
- A. paper
- B. paper, steel
- C. steel, oil
- D. timber, steel, oil
- E. steel, paper, oil
- 3. If Lanesville is the first port at which the ship stops, which one of the following could be an accurate list of the cargoes, from the first unloaded to the last?
- A. oil, paper, timber, steel
- B. oil, timber, steel, paper
- C. oil, steel, paper, timber
- D. paper, steel, timber, oil
- E. steel, oil, timber, paper
- 4. If the first two ports at which the ship stops are Gulf Shores and Lanesville, which one of the following must be true?
- A. The ship carries the timber longer than it carries the paper.
- B. The ship carries the steel longer than it carries the timber.
- C. The ship carries the oil longer than it carries the paper.
- D. The ship carries the timber longer than it carries the steel.
- E. The ship carries the paper longer than it carries the oil.
- 5. If the ship is not carrying steel when it reaches Middleton, then which one of the following CANNOT be true?
- A. The ship stops at Gulf Shores first.
- B. The ship stops at Gulf Shores last.
- C. The ship stops at Lanesville second.
- D. The ship stops at Newport second.
- E. The ship stops at Newport third.

## Game 14 – Cargo Ship

- 1. D 2. C 3. B 4. A
- 5. C

This is a game where you end up with a grid, and often times you can only deduce some of the relationships, such as the place of the cargoes or the order of the cargoes. Intense diagrams will help you less in a game like this–you need to focus on each question and what you can deduce.

The first question is the usual testing of the rules, and each of the four incorrect answers breaks a rule. On Question 2, you can deduce that the ship stops at Gulf Shores last, and thus at Lanesville and Middleton second and third or vice versa. The timber can't be let off because it must stay on longer than the oil, and the paper has to go to either Gulf Shores or Lanesville. This leaves steel and oil, neither of which needs to stay on under the fourth rule, since this is a conditional rule, and the ship need not carry timber to Lanesville or beyond.

On Question 3, each of the four answer choices break a rule, and it is a matter of taking each rule and eliminating a choice in which the rule is broken. On Question 4, you have to deduce that the paper must be one of the first two cargoes, and the oil is before the timber–thus the timber stays on longer.

On Question 5, the ship can't stop at Lanesville second because both the timber and the steel need to be let off before Lanesville–remember that if the timber is still on when the ship reaches Lanesville, the steel is still on when the ship reaches Middleton. This means Lanesville must be the third or fourth stop.