



MANHATTAN
LSAT

Composite Board

Directions: Each group of questions in this section is based on a set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. Choose the response that most accurately and completely answers each question and blacken the corresponding space on your answer sheet.

Questions 1–7

Atlas Industries is constructing composite boards that include at least 6 but no more than 7 layers. The materials that are used as layers in the boards are categorized as either insulating, metallic, or wooden, and a board must include at least one layer of each of the three categories of material. No other categories of materials are used. There are exactly three insulating materials available—fleece, Gore-Tex and hay—two metallic materials—krypton and lead—and three wooden materials—pine, oak and spruce. A board may not contain two layers made of the same exact material. During the construction of a board, the bottom layer is always numbered 1, with layers above that numbered in increasing and consecutive order until the top layer, which is numbered 6 or 7. A layer touches only the layers that lie above or below it in a board.

The construction of the boards must adhere to the following conditions:

Any insulating layer that is used must touch exactly two layers, neither one of which is an insulator.

A layer of lead cannot touch a layer of fleece.

Krypton can touch fleece only if krypton touches two insulating layers.

No wooden layer can touch a metallic one.

The top layer is wooden if, and only if, the bottom layer is as well.

- Which one of the following could be a list of the layers used in a board, in order from bottom to top?
 - pine, oak, Gore-Tex, lead, fleece, spruce
 - krypton, Gore-Tex, spruce, fleece, oak, pine
 - spruce, hay, krypton, Gore-Tex, lead, pine
 - pine, fleece, krypton, lead, Gore-Tex, oak
 - oak, spruce, fleece, krypton, Gore-Tex, pine
- If fleece is second, each of the following could be true EXCEPT:
 - A layer of insulator is sixth.
 - A layer of wood is seventh.
 - A layer of metal is sixth.
 - A layer of insulator is fourth.
 - A layer of wood is sixth.
- If spruce is the fourth of seven layers, each of the following could be true, EXCEPT:
 - Oak touches Gore-Tex.
 - Fleece touches spruce.
 - Pine touches hay.
 - Pine touches spruce.
 - Lead touches hay.
- If lead touches krypton and Gore-Tex, and pine is not used in the construction of a given board, how many different arrangements of layers can be used?
 - 2
 - 3
 - 4
 - 5
 - 6
- Each of the following could be true EXCEPT:
 - Lead is the first layer and fleece is the fifth.
 - Lead touches Gore-Tex and hay.
 - Pine touches oak and spruce.
 - Oak is the second layer and Gore-Tex is the sixth.
 - Krypton and lead touch each other.
- Which one of the following, if substituted for the condition that a layer of wood cannot touch one of metal, would also prevent a layer of wood and a layer of metal from touching each other?
 - All three layers of wood are used.
 - All three layers of insulator are used.
 - Both layers of metal are used.
 - Each layer of insulator must touch both a layer of wood and one of metal.
 - Each layer of metal touches at least one layer of insulator.
- If two wooden layers touch each other and two metallic layers touch each other, what is the greatest possible number of layers in between Gore-Tex and spruce?
 - 0
 - 1
 - 2
 - 3
 - 4

COMPOSITE BOARD (MANHATTAN LSAT)

1. E
2. C
3. B
4. C
5. A
6. B
7. E

The questions on the previous page are simulated LSAT questions and are not meant to be used in place of actual LSAT questions. Visit Cambridge LSAT (<http://www.cambridgelsat.com>) to purchase and download actual LSAT questions.