

The MAT Analogy

An analogy states that two things are related to each other in the same way that two other things are related to each other. The equation for an analogy is written in the form $A : B :: C : D$, which can be read as "A is to B as C is to D" or as "A is related to B in the same way that C is related to D."

In the MAT, one term in an analogy has been replaced with four options, only one of which will correctly complete the analogy. An example of a MAT analogy is $PLANE : AIR :: BOAT : (a. \text{ submarine, } b. \text{ fish, } c. \text{ water, } d. \text{ pilot})$ which is read "PLANE is to AIR as BOAT is to (a. submarine, b. fish, c. water, d. pilot)."

To answer an analogy item, you must select the option (a, b, c, or d) that creates a valid analogy.

The option that correctly completes the above analogy is c. water. The relationship is that a PLANE travels on AIR, and a BOAT travels on WATER.

Any one of the terms in a MAT analogy may be replaced with the four options. All of the following are proper formats for a MAT analogy:

$SALT : HYPERTENSION :: SUGAR : (a. \text{ cholesterol, } b. \text{ carbohydrates, } c. \text{ hyperthyroidism, } d. \text{ diabetes})$

Solution: The answer is d. SALT contributes to or aggravates the symptoms of HYPERTENSION. SUGAR does the same for DIABETES.

$SEEK : FIND :: (a. \text{ locate, } b. \text{ book, } c. \text{ retrieve, } d. \text{ listen}) : HEAR$

Solution: The answer is d. One SEEKS in order to FIND something. One LISTENS in order to HEAR something.

$INDUCTION : (a. \text{ confirmation, } b. \text{ graduation, } c. \text{ ordination, } d. \text{ resistance}) :: SOLDIER : PRIEST$

Solution: The answer is c. INDUCTION is the ceremony for becoming a SOLDIER. ORDINATION is the ceremony for becoming a PRIEST.

$(a. \text{ cure, } b. \text{ epidemic, } c. \text{ immunity, } d. \text{ patient}) : SHADE :: INOCULATION : PARASOL$

Solution: The answer is c. A PARASOL produces SHADE. An INOCULATION produces IMMUNITY.

Rearranging MAT Analogies

The solution to a MAT analogy sometimes becomes clearer if you rearrange the terms of the analogy.

The terms of an analogy can be interchanged. That is, the analogy $A : B :: C : D$ will remain a valid analogy if it is rearranged to $A : C :: B : D$.

Thus, the analogy

FRENCH : ROMAN :: RUSSIAN : CYRILLIC,

where the relationship is that FRENCH uses the ROMAN alphabet and RUSSIAN uses the CYRILLIC alphabet, remains a valid analogy when it is reordered to read

FRENCH : RUSSIAN :: ROMAN : CYRILLIC.

No matter how these terms are presented, there is only one valid and logical relationship that exists between each pair of terms.

Reasoning Out Relationships in MAT Analogies

There are four basic steps in reasoning out a MAT analogy.

1. Read the analogy carefully;
2. Determine the relationship between either the two terms on the left of the equation or the two terms on the right of the equation (remember, you can manipulate the order of the terms as shown in the example in the preceding section);
3. Look at the remaining given term, and think of the word that would have the same kind of relationship to it; and
4. Examine the answer choices and select the option that most closely resembles your idea.

Following are a number of analogies with possible ways of reasoning through them.

NAIVE : (*a.* foolish, *b.* innocent, *c.* unconcerned, *d.* devious) :: SOPHISTICATED : WORLDLY

In examining the three given terms, you need to recognize that SOPHISTICATED and WORLDLY have similar meanings. The correct answer, then, should be a synonym for NAIVE. The correct answer is *b. innocent*. This item can also be interpreted as an antonymous analogy by interchanging the middle terms. NAIVE is the opposite of SOPHISTICATED. What is the opposite of WORLDLY? Again, the answer is *b. innocent*.

ANNOY : ENRAGE :: ENLARGE : (*a. increase, b. exaggerate, c. augment, d. reduce*)

To ENRAGE is to ANNOY to a greater degree. Thus the correct answer should be the word which means to ENLARGE, but to a greater degree. The correct answer is *b. exaggerate*. This is an example of an item that requires you to distinguish fine shades of meaning and establish the best relationship. If you (incorrectly) thought that ANNOY and ENRAGE were synonyms, then you might have chosen *a. increase*, or *c. augment*, as the answer. You could have eliminated these two choices because they are synonyms and therefore if one were correct, the other would also be correct. Since there is only one correct solution to each MAT analogy, neither could be the correct answer.

SPENSER : POETRY :: SHAKESPEARE : (*a. novel, b. drama, c. lyric, d. essay*)

In looking at the three given terms, we see that there is a creator : creation relationship between SPENSER and POETRY. Edmund Spenser is best known for his poetry, such as *The Faerie Queene*. Thus the correct answer should be the type of literature that SHAKESPEARE is best known for creating. The correct answer is therefore *b. drama*.

POEM : (*a. line, b. rhyme, c. stanza, d. sonnet*) :: BOOK : CHAPTER

The last two of the three given terms have a whole : part relationship. A section of a BOOK is a CHAPTER. The missing term, then, should be the word for a section of a POEM. The correct answer is *c. stanza*. A line is also part of a poem, but it is not a complete section as a chapter is a complete section of a book.

INDEPENDENCE : 1776 :: EMANCIPATION : (*a. 1787, b. 1812, c. 1863, d. 1916*)

The relationship between the first two given terms is one of event : date. The Declaration of INDEPENDENCE was issued in 1776. So the missing term should be the year that the EMANCIPATION Proclamation was issued. The correct answer is *c. 1863*.

STRIKE : (*a. picket, b. union, c. customer, d. employer*) :: BOYCOTT : SELLER

This economics item presents a relationship of action : object. A BOYCOTT is an action taken against a SELLER. Against whom is a STRIKE directed? The correct answer is *d. employer*.

CARNIVORE : HERBIVORE :: TIGER : (*a. shark, b. predator, c. antelope, d. lion*)

A TIGER is an example of a CARNIVORE; that is, a tiger eats meat. The missing term should be a particular animal that eats only plants, a HERBIVORE. The correct answer is *c. antelope*.

LIMESTONE : (*a. sedimentary, b. metamorphic, c. volcanic, d. metallic*) :: GRANITE : IGNEOUS

The last two given terms have a member : group relationship. GRANITE is a kind of IGNEOUS rock. What kind of rock is LIMESTONE? The correct answer is *a. sedimentary*.

(*a. radius, b. diameter, c. area, d. circumference*) : PERIMETER :: CIRCLE : SQUARE

In examining the three given terms, we recognize that the distance around a SQUARE is its PERIMETER. What, then, is the distance around a CIRCLE? The correct answer is *d. circumference*.

4 : 64 :: 5 : (*a. 25, b. 50, c. 90, d. 125*)

One possible relationship is that 4 times 16 equals 64. However, this cannot be the relationship since 5 times 16 is 80 and 80 is not listed as a possible answer.

The relationship here is that 4 cubed equals 64. Since 5 cubed is 125, the correct answer is *d. 125*.

PINT : (*a. cup, b. quart, c. liter, d. gallon*) :: 1 : 2

This analogy uses a ratio relationship of 1 : 2. Which answer is TWO times the volume of a PINT? The correct answer is *b. quart*.

Test-taking Strategies for the MAT

Read All the Answer Options

Do not select the first answer you come to that seems to make sense. It may seem to fit, but a better choice may also be listed. Remember, you are looking for the **best** answer.

Consider Other Meanings of a Word

If an analogy doesn't make sense to you, you may need to think of a different meaning for one or more of the words in the analogy. For instance, in the analogy *NAPOLEON : WAGON :: (a. coin, b. baker, c. general, d. statue) : WAINRIGHT*, the analogy makes no sense if you read *NAPOLEON* as meaning the man. However, a *NAPOLEON* is also a pastry. Once you have the right definition of *NAPOLEON*, you can reason that a wagon is made by a wainright and a *NAPOLEON* is made by a *BAKER*.

Reorder the Analogy

As explained in *Rearranging MAT Analogies*, sometimes a relationship becomes clearer if you change the order of the terms.

Check the Part of Speech

The answer you choose should be the same part of speech as the corresponding term in the complete pair. For example the answer to NOUN : VERB :: NOUN : ? has to be another verb, not some other part of speech such as a noun or adjective.

Considering parts of speech can also help you look at an analogy in a new way. For instance, in the analogy TABLE : BILL :: (*a. shelf, b. shelve, c. conveyor, d. convey*) : MOTION, two options are nouns and two options are verbs. If your first reaction to TABLE and BILL was to think of them as nouns, the presence of verbs as options should lead you to also think of either or both as verbs. This analysis is likely to lead you to the realization that to delay consideration of a BILL is to TABLE it and to delay consideration of a MOTION is to SHELVE it.

Postpone Difficult Items

The MAT is a timed test. Since you are to answer 100 questions in 50 minutes, on average you have half a minute per analogy to solve the analogy and mark your answer document. Since each question counts the same, do not spend too much time on an analogy in which the relationship is not apparent to you. Move on to the next analogy, and return to analogies that were unclear to you after you have completed the analogies that are clear to you.

Allow the last 10 minutes or so of the testing period to go back to the items you skipped. When you return to an analogy, you may understand it more clearly than you did the first time you looked at it. One explanation of why this new clarity occurs is that the more analogies you complete, the more used to solving analogies your mind becomes. Another reason may be that you have unconsciously been thinking about the analogies you skipped. If the answer does not come to you quickly on your second try, mark your best guess and move on.

When You Guess, Try to Make an Informed Guess

Eliminate answer options which do not seem to fit and guess among the remaining options. If you make a straight guess at an answer, you have a one-in-four chance of getting it right; if you can eliminate one option, you have a one-in-three chance of getting it right; and if you can eliminate two options, you have a one-in-two chance of getting it right.

If an analogy completely baffles you, look for clues. For instance, the analogy SINANTHROPUS : PITHECANTHROPUS :: (*a. Peking, b. Hong Kong, c. Cairo, d. Kabul*) : JAVA might well mean nothing to you when you first read it. However, the presence of “-ANTHROPUS” in the first and second terms may lead you to realize that this analogy has to do with “man” and from there you may well make the connection between JAVA man and PEKING man and arrive at the correct answer of *a. Peking*. Or, you might reason that since the suffixes for the first two terms are the same, it must be the prefixes that distinguish them. If you know that “Sino-” is the prefix for Chinese, you can figure there is a reasonable chance that the correct answer is either *a. Peking* or *b. Hong Kong*.

Answer Every Question

Your score is based on the number of correct answers you give. There is no correction for guessing or extra penalty for a wrong answer. If you have no idea what the correct answer is, go with a hunch or a straight guess. An item to which you do not respond will be scored as a wrong answer. If you guess, at least you have a one-in-four chance of getting the item right.

Mark Your Answer Document Carefully

Keep your place, especially if you skip items. Putting the right answer in the wrong place can be extremely frustrating.

Make sure your marks completely fill the circles.

Do not mark more than one answer for each question. Questions with more than one circle marked are always scored as incorrect.