Preparing for the MAT

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The Purpose of the MAT

The Miller Analogies Test is a graduate admissions and scholarship exam required by over 2,300 schools in the U.S. and Canada.

The test is administered by the Psychological Corporation, the oldest test publisher in the country (1921).
The Purpose of the MAT

- To measure scholastic aptitude at the graduate school level
- To test high-level analytical ability, mental ability, and critical thinking skills
- To test reasoning ability in a multitude of subject areas.
- Vocabulary and general information play an important role in determining MAT scores.
The Purpose of the MAT

- You are not expected to have in-depth knowledge in all subject areas.
- There is little esoteric or profound knowledge required within the subject area.
- You need to show that you can discern the relationship between the words in the questions.
What is an Analogy?

- An analogy is a relationship between two things which may be unlike in some respects but similar in at least in one way.
- In its general meaning, an analogy is a comparison between things which, on the surface, seem to be quite dissimilar.
General Analogies

- The figures of speech known as similes and metaphors are basically analogies.
  - “My love is like a red, red rose.”
  - “Making sense out of that conversation was like swimming through molasses.”
Formal Analogies

- Formal analogies, like general analogies, all make comparisons, but they match *pairs* of terms with similar relationships rather than comparing only two terms.
- Formal analogies test your ability to see a relationship between two words and to recognize a similar relationship between two other words.
Formal Analogies

- In formal analogies, the two terms in one pair must have the same or a very similar relationship to each other as the two terms in the other pair have to each other.
- If you can’t find the relationship between the first and the second words, look for a relationship between the first and the third words.
Formal Analogies

- Formal analogies have specific rules of logic and conventions.
- One convention is the use of the colon and double colon.
- In the verbal comparison, a colon separates two words that can be compared.
Formal Analogies

- The colon is read as *is to* or *is related to*.
- COLD:HOT reads “cold is to hot” and means the word cold is related to the word hot.
- The double colon is read as *as to* or *in the same way as*.
Formal Analogies

- COLD:HOT::BAD:GOOD reads “cold is to hot as bad is to good” and means the word cold is related to the word hot in the same way as bad is to good.

- A formal analogy is the verbal equivalent of a proportion in mathematics.
  - COLD:HOT=BAD:GOOD
In analogy tests, one of the words is missing and you are given several words to choose from to complete the analogy correctly.

- One word in the verbal equation has been replaced with four choices.
Formal Analogies

- Only one choice accurately completes the relationship.
  - A sentence can be constructed that makes clear the relationship between the words.

- The key to competing analogies is to recognize the pattern within them.
  - Understanding the *relationship* presented
Formal Analogies

- Answer choices may appear in the place of any word in the analogy, that is the first, second, third, or fourth position.
- The given terms are in capital letters and the answer choices are in lower case letters.
- Term #1 can be paired with term #2 or with term #3. It cannot be paired with term #4.
Formal Analogies

- Term #2 can never be paired with term #3.
- Do not consider arrangements that combine #1 and #4 or #2 and #3.
- Wrong answer choices are often constructed to fool you into thinking that this a possible arrangement.
Formal Analogies

- Parts of speech are always consistent within individual analogies.
  - Drill:Hammer::Flute:Piano is correct.
  - Inaugurate: President::Coronation:King is incorrect.
Steps in Solving an Analogy

- Read the analogy carefully.
- Find the relationship between two of the three words presented.
  - Determine if the analogy is a 1:2 or 1:3 analogy.
  - Look at the third unpaired term and predict the word or type of word that it will be paired with.
- Make up a sentence that expresses the relationship.
Steps in Solving an Analogy

- Go through the answer choices and substitute them for the third word in the sentence.
- If more than one answer seems to work, make the sentence express a more specific relationship.
- Choose the best answer even if none of the choices works exactly.
Steps in Solving an Analogy

- If you are completely stumped, check the answers and eliminate if you can.
- If all else fails, fill in a guess answer.
Steps in Solving an Analogy

- **Examples**
  - **DOCTOR:SYMPTOM:: DETECTIVE:** (A. mystery, B. crime, C. police, D. clue)
  - **DOCTOR:DETECTIVE:: SYMPTOM:** (A. mystery, B. crime, C. police, D. clue)
  - **PLAY:AUDIENCE::BOOK:** (A. writer, B. publisher, C. plot, D. reader)
Subject Areas

- You do not need to know each of these subject areas in depth to do well.
- The questions cover knowledge you have been exposed to in high school, undergraduate work, or nonacademic reading.
- The most important skill to master is the identification of relationships.
Subject Areas

- The subject matter is considered to be common knowledge among educated people at your level of schooling.
- It is not expected that you will know all of the information required to answer all of the questions correctly.
Subject Areas

- General Knowledge
  - Understanding of the meanings of English words and general understanding of people, things, and their names and functions in the world.
  - Not specific to any subject area
  - There are more analogies in this area than any other
Subject Areas

- **Natural Science**—uses natural science terms and information that may come from biology, botany, chemistry, physics, geology, astronomy, or medicine.

- **Social Science**—analogies may come from the fields of history, geography, archeology, economics, anthropology, political science, psychology, sociology, and philosophy.
Subject Areas

- Mathematics—drawn from arithmetic, algebra, and geometry and may involve knowledge of terms, formulas, and basic computation
- Literature—involves world writers and their creations in short stories, novels, essays, poetry, drama, mythology, and nonfiction and literary forms and terminology
Subject Areas

- Fine Arts—knowledge of music, dance, theater, painting, sculpture, and architecture
- Grammar/Linguistics/Word Play—language and its structure, meaning, and symbols. Also elements of grammar, combination of words into compound words, meaning of prefixes, and roots, figures of speech.
Subject Areas

- Mixed Subject Areas—one pair of terms comes from one subject area and the other from another subject area. Each pair will still exhibit the same relationship.
Major Types of Pair Relationships

- Synonym/Synonym—the relationship is between the word and its synonym or words that have the same or very similar meaning. Tests your vocabulary in that you must understand the precise meaning of words
  - habitation:abode::void:blank
  - examine:scrutinize::premeditate:plan
Antonym/Antonym—the relationship is between the word and its antonym or words of opposite or nearly opposite meaning. Primarily a test of vocabulary.

- Fragment: assemble:: impoverish: enrich
Major Types of Pair Relationships

- Part/Whole—the relationship between a segment and the whole entity. Also a member of a group or class to the whole group or class. Can be presented in either order but both pairs must follow the same order
  - bank: vault:: zoo: cage
  - Jack: tool:: hail: precipitation
Major Types of Pair Relationships

- Cause/Effect—the word and the outcome it causes. Can be presented in either order and may involve either physical or nonphysical relationships.
  - bacteria:disease::sun:heat
Major Types of Pair Relationships

- **Degree/Sequence**—A situation and its greater or lesser degree of intensity, including chronology or size
  - happy:exhilarated::punish:castigate

- **User/tool**—the name of a person who uses a specific tool
  - dentist:drill::carpenter:hammer
Major Types of Pair Relationships

- **Measurement**—deals with units of measurement. May involve ratios, numbers and computations
  - twins:quadruplets::week:fortnight
- **Characteristic**—relationship between a person or thing and the characteristic it represents
  - Prevaracator:lies::thief:steals
Major Types of Pair Relationships

- **Part/Part**—involves a physical part of a thing and another physical part of the same thing or a member of a group or class and another member of that same group or class.
  - axle:carburetor::bulb:shade
Major Types of Pair Relationships

- **Spatial/Place**—may involve shape or relative position. Deals with physical presence in space and physical similarities and differences
  - book:cube::barrel:drum

- **Actor/Action**
  - physician:treat::artist:create
Major Types of Pair Relationships

- **Actor/Object**
  - accountant:numbers::mechanic:engines

- **Actor or Action/Purpose/Function**—similar to cause and effect analogies
  - paint:protect::wash:clean
Major Types of Pair Relationships

- Grammar/Linguistic/WordPlay—Nonsemantic
  - ere: mom::dewed: refer
- Objective/Material
- Symbol/institution
- Trait/example
Test-Taking Tips

- Don’t wait until the last minute to prepare.
- Duplicate actual testing conditions when taking practice tests.
- Read every question completely and carefully.
- Test items increase in difficulty throughout the test.
- Eat something but avoid sugar.
- Go to the bathroom before the test.
Test-Taking Tips

- Pace yourself.
- Use all the time allotted.
- Answer every question.
- Skip questions you cannot answer.
- Eliminate wrong answers.
- If all else fails, guess.
- Be self-confident.