

QMAT Diagnostic Tool

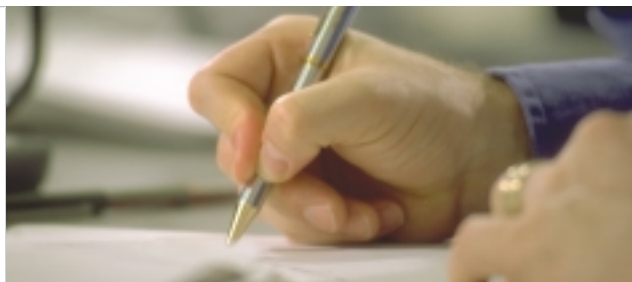
The Queen's MBA Admission Test (QMAT) is a diagnostic tool designed for Queen's by Kaplan Educational Centers Inc. to assess your knowledge of the basic math and verbal skills required for success in *Queen's Executive MBA* program.

Soon after writing the QMAT, you'll receive a feedback form that outlines your areas of strength and weakness, with suggestions for improvement. This diagnostic tool is a helpful guide that allows you to strengthen any areas of weakness before you begin your MBA studies.

At Queen's we look at all requirements for admission – your QMAT score, your academic history, your work history, and your references.

QMAT REGISTRATION

To register for the QMAT, call *Queen's Executive MBA* program office.



TRY THE QMAT MINI-TEST

On the following two pages you'll find the QMAT mini-test. Try the mini-test to get a quick assessment of your readiness for the full QMAT.

- Take a pencil and a timer to a quiet spot.
- Set the timer for 30 minutes.
- Read the instructions, and write the test.
- Stop after the 30 minutes are up.
- Check your answers against those on page 57.

INTERPRETING YOUR MINI-TEST RESULTS

Your score will vary depending on a number of factors, including the number of years you've been out of school, your quantitative orientation, and your day-to-day job responsibilities. In fact, most applicants find they benefit from some form of preparation for the QMAT or GMAT because they've been out of a formal testing environment for many years.

Once you've written the mini-test, please call the *Queen's Executive MBA* program office and we will help you assess your results. We can provide access to free QMAT workshops and materials to help you improve your score if necessary.

QMAT PREPARATION

Workshops

QMAT preparatory workshops are conducted free of charge for qualified *Queen's Executive MBA* applicants by Kaplan Educational Centers Inc. The workshops are held on Saturdays throughout the year. Call *Queen's Executive MBA* program office for dates and registration.

Kaplan Materials

A 200-page QMAT preparatory guide is available free of charge to qualified *Queen's Executive MBA* applicants. The guide includes a math reference, grammar reference, and alternative problem-solving methods.

GMAT REGISTRATION

We also accept GMAT scores for admission to *Queen's Executive MBA* program. GMAT scores should be forwarded by Educational Testing Service directly to Queen's. The code for Queen's is 0290. Information and registration materials for the GMAT may be obtained by visiting www.gmac.com.

GMAT PREPARATION

Kaplan Materials

The Kaplan GMAT prep book is available free of charge to *Queen's Executive MBA* applicants. The book includes a CD-ROM with interactive lessons, practice questions, and a personalized study plan. Updates are available free of charge at www.kaplan.com.

QMAT Mini-Test

The following test contains examples of all the questions you'll find on the QMAT. They are all multiple choice questions. (Do not use a calculator.)

PROBLEM SOLVING

- 1) In a certain Canadian province, a person may inherit up to \$8,000 tax free, but any amount in excess of \$8,000 is taxed at a rate of 6%. If Tony inherits a total of \$11,500, how much tax will he have to pay?

- a) \$210 d) \$420
b) \$270 e) \$510
c) \$300

- 2) If $xy > 0$, which of the following CANNOT be true?

- a) $x > 0$ d) $x \div y < 0$
b) $y < 0$ e) $x \div y > 0$
c) $x + y < 0$

- 3) If both 5^2 and 3^3 are factors of $n \times 2^5 \times 6^2 \times 7^3$, what is the smallest possible positive value of n ?

- a) 25 d) 75
b) 27 e) 125
c) 45

4)

on time	$x\%$
up to 15 minutes delay	43%
15–30 minutes delay	17%
30–60 minutes delay	12%
more than 60 minutes delay	3%

The chart above shows how long departures from a certain airport were delayed on a certain day. If 1,200 flights were delayed, how many flights departed on time?

- a) 250 d) 400
b) 300 e) 900
c) 350

- 5) A letter has two stamps on it, making up a total postage of \$1.19. If one stamp costs 35 cents less than the other, what is the cost of the more expensive stamp?

- a) \$0.35 d) \$0.84
b) \$0.42 e) \$1.01
c) \$0.77

- 6) The average (arithmetic mean) of $3a + 4$ and another number is $2a$. What is the average of the other number and a ?

- a) $2a$ d) $a + 2$
b) $a - 4$ e) $a + 4$
c) $a - 2$

CRITICAL REASONING

- 7) Electrical engineers have developed an energy-efficient type of light bulb that can replace the traditional incandescent bulb. The new bulb, known as the electronic lamp, operates by using a high-frequency radio signal rather than the filament featured in incandescent bulbs. Although the electronic lamp currently costs 20 times as much as its traditional counterpart, its use will prove more cost-effective in the long run. While a 100-watt incandescent bulb lasts six months if burned for four hours daily, a 25-watt electronic lamp used for the same amount of time each day lasts up to 14 years.

The argument above assumes that

- a) the typical household use of a light bulb is approximately four hours a day.
b) aside from its greater efficiency, the electronic lamp resembles the incandescent light bulb in most aspects.
c) the type of light cast by the electronic lamp is different from that cast by an incandescent bulb.
d) the price of electronic lamps will decrease as they are produced in increasingly greater quantities.
e) a 100-watt incandescent light bulb does not provide significantly more light than a 25-watt electronic lamp.

- 8) People with Williams syndrome, a rare mental disorder, are often highly articulate and sensitive. Not uncommonly, they are gifted in music and possess rich vocabularies. Yet these same people, because of their lack of ability in basic arithmetic and difficulty distinguishing left from right, are misleadingly labeled mentally handicapped. As evaluated by conventional means such as IQ tests, their intelligence is no higher than that of people with Down syndrome, despite the fact that people with Down syndrome, like most mentally handicapped people, have uniformly limited cognitive abilities and show no specialized aptitudes.

The author is arguing that

- a) conventional methods of measuring intelligence, such as IQ tests, are inadequate for evaluating people with certain mental disorders such as Williams syndrome.

- b) people with Down syndrome usually have less verbal and musical ability but more mathematical and spatial ability than do people with Williams syndrome.
c) conventional methods of measuring intelligence tend to consider basic mathematical and spatial ability to be more important than verbal and musical skills.
d) people with Williams syndrome are only rarely given the opportunity to develop their unique musical and verbal abilities.
e) people with Williams syndrome need greater encouragement if they are to develop their mathematical and spatial skills.

- 9) Between 1977 and 1989, the percentage of income paid to Federal taxes by the richest one percent of Canadians decreased, from 40 percent to 25 percent. By the end of that same period, the richest one percent of Canadians were paying a larger proportion of all Federal tax revenues, from 12.7 percent in 1977 to 16.2 percent in 1989.

Which of the following, if true, contributes most to an explanation of the discrepancy described above?

- a) Between 1977 and 1989, Revenue Canada decreased the percentage of its staff members responsible for audits and tax collection.
b) Between 1977 and 1989, the before-tax income of the richest one percent of Canadians increased by over 75 percent when adjusted for inflation.
c) Between 1977 and 1989, many of the richest one percent of Canadians shifted their investment from untaxable to taxable assets.
d) Between 1977 and 1989, the top tax rate was reduced from 70 percent to 31 percent and several tax loopholes were eliminated.
e) Between 1977 and 1989, the amount of Federal taxes paid by the richest one percent of Canadians increased by \$45 billion, while the amount paid by all Canadians rose by \$50 billion.

SENTENCE CORRECTION

For each question, choose the correct version of the underlined portion. The first choice is always a repeat of the version in the question.

- 10) Born in Montréal in 1931, Mordecai Richler's fourth novel, *The Apprenticeship of Duddy Kravitz*, was written while the author was living abroad and published when the author was twenty-eight.
a) Mordecai Richler's fourth novel, *The Apprenticeship of Duddy Kravitz*, was written while the author was living abroad and published when the author
b) Mordecai Richler's fourth novel, *The Apprenticeship of Duddy Kravitz*, written while he was living abroad, was published when the author

- c) Mordecai Richler's *The Apprenticeship of Duddy Kravitz*, his fourth novel, was written while the author was living abroad and published when he
d) Mordecai Richler wrote his fourth novel, *The Apprenticeship of Duddy Kravitz*, while living abroad and published it when he
e) when Mordecai Richler was living abroad, he wrote his fourth novel, *The Apprenticeship of Duddy Kravitz*, publishing it when he

- 11) Canadian executives, unlike their Japanese counterparts, have pressure to show high profits in each quarterly report, with little thought given to long-term goals.

- a) have pressure to show
b) are under pressure to show
c) are under pressure of showing
d) are pressured toward showing
e) have pressure that they should show

- 12) Each of Margaret Laurence's novels in the "Manawaka Series" – *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – are set in Manawaka, a fictional town inspired by her hometown of Neepawa, Manitoba.

- a) Each of Margaret Laurence's novels in the "Manawaka Series" – *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – are set in Manawaka,
b) *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – each of them novels in Margaret Laurence's "Manawaka Series" – are set in Manawaka,
c) Margaret Laurence's "Manawaka Series" novels – *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – are all set in Manawaka,
d) Novels by Margaret Laurence – *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – each one of the "Manawaka Series" novels, is set in Manawaka,
e) Novels by Margaret Laurence – *The Stone Angel*, *A Jest of God*, *The Fire-Dwellers*, and *A Bird in the House* – every one of the "Manawaka Series" novels are set in Manawaka,

- 13) A common social problem in the workplace occurs when workers accept supervisory positions, and it causes them to lose the trust of their former coworkers.

- a) when workers accept supervisory positions, and it causes them to lose
b) by a worker accepting supervisory positions, which causes him to lose
c) when workers accept supervisory positions, and so lose
d) when a worker who accepts a supervisory position, thereby losing
e) if a worker accepts a supervisory position, he would lose

READING COMPREHENSION

Read the following passage, then answer the questions that follow.

An important feature of the labour market in recent years has been the increasing participation of women, particularly married women. Many analysts suggest, however, that women comprise a secondary labour market where rates of pay and promotion prospects are inferior to those available to men. The principal reason is that women have, or are assumed to have, domestic responsibilities that compete with paid employment. Such domestic responsibilities are strongly influenced by social values that require women to give priority to home and family over paid employment.

The difficulties women face in the labour market and in their ability to reach senior positions in organizations are accentuated with the arrival of children. In order to become full-time employees, women with children must overcome the problems of finding good, affordable childcare and the psychological barriers of workplace marginality. Some women balance domestic and workplace commitments by working part-time. However, part-time work is a precarious form of employment. Women part-timers are often the first laid off in a difficult economy. These workers are often referred to as the “reserve army” of female labour.

One researcher has found that approximately 80 percent of women in their twenties who have children remain at work. Such women who later return to work represent another sector of the workforce facing difficulties. When the typical houseworker returns to the labour market she is unsure of herself in her new environment. This doubt is accentuated by her recent immersion in housework, a very private form of work. Without recent employment experience, these women confront a restricted range of opportunities and will almost certainly be offered low-status jobs with poor prospects.

Even women professionals who interrupt their careers to have children experience difficulties. Their technical skills may become rusty or obsolete, important networks of business contacts are broken, and their delayed return to work may mean that they are likely to come up for promotion well after the age which would be otherwise normal. Consequently, women, even those of high ability, may find themselves blocked in the lower echelons of an organization, overlooked or even “invisible” to senior management.

- 14) The author of the passage is primarily concerned with
- advocating changes in employers’ practices toward women with children.
 - examining some of the reasons women rarely reach the higher echelons of paid labour.

- describing the psychological consequences for women working outside the home.
- taking issue with those who believe women should not work outside the home.
- analyzing the contribution of women to industry and business.

- 15) It can be inferred from the passage that the “doubt” felt by women returning to the labour market is compounded by which of the following?
- Inability to update their technical skills
 - Difficulties experienced in raising children
 - Restricted employment opportunities
- I only
 - III only
 - I and II only
 - I and III only
 - I, II, and III
- 16) The author’s discussion of women professionals in the last paragraph serves to
- show that the difficulties of integrating career and motherhood can be overcome.
 - indicate that even women of higher status are not exempt from the difficulties of integrating careers and children.
 - defend changes in the policies of employers toward working mothers.
 - modify a hypothesis regarding the increased labour force participation of women.
 - point out the lack of opportunities for women in business.

DATA SUFFICIENCY

This section requires you to decide whether you have enough information to solve a given problem. You will be asked to choose one of the following answers:

- Statement (1) BY ITSELF is sufficient to answer the question, but statement (2) by itself is not.
- Statement (2) BY ITSELF is sufficient to answer the question, but statement (1) by itself is not.
- Statements (1) and (2) TAKEN TOGETHER are sufficient to answer the question, even though NEITHER statement BY ITSELF is sufficient.
- Either statement BY ITSELF is sufficient to answer the question.
- Statements (1) and (2) TAKEN TOGETHER are NOT sufficient to answer the question, requiring more data pertaining to the problem.

- 17) If a and b are positive integers, what is the value of a ?
- $a = 3b + 5$
 - $b = 75$
- 18) If a rectangle has length a and width b , what is its area?
- $2a = 15 \div b$
 - $a = 2b - 2$
- 19) If $2^{2m+1} = 2^{n+2}$, what is the value of $m + n$?
- $2^{3n+1} = 256$
 - $2^{m+2n} = 256$
- 20) What is the ratio of men to women in a certain class?
- The number of women enrolled in the class is 3 less than half the number of men enrolled.
 - The number of women enrolled in the class is $\frac{2}{5}$ the number of men enrolled.

ANSWERS

- (a) $\$11,500 - 8,000 = 3,500$. 6% of 3,500 is \$210.
- (d) If $xy > 0$, then xy is positive. This means that x and y are either both positive or both negative. They can’t have different signs.
- (d) The approach here is not to multiply out the numbers, but rather to completely factor the large number, then compare its factors to 5^2 and 3^3 . Any 5s or 3s that can’t be factored out of $2^5 \times 6^2 \times 7^3$ (or $2^5 \times 2^2 \times 3^2 \times 7^3$) will have to be factors of n . Since we can account for two 3s, but no 5s in the large number, 5^2 and the remaining 3 must be factors of n . Therefore n is equal to $5 \times 5 \times 3$.
- (d) $43\% + 17\% + 12\% + 3\% = 75\%$, or $\frac{3}{4}$. If 1,200 = $\frac{3}{4}$ (representing the number of flights that were late), then $\frac{1}{4}$ of the flights were on time. If $\frac{3}{4} = 1,200$, then $\frac{1}{4}$ equals 400.
- (c) Use algebra to answer the question: $x + (x + 35) = 119$; $2x + 35 = 119$; $2x = 84$; $x = 42$. The cost of the more expensive stamp is \$0.77.
- (c) If the other number is x , then $\frac{(3a+4)+x}{2} = 2a$; then we can solve x in terms of a : $(3a+4) + x = 4a$; $x = 4a - (3a+4)$; $x = a - 4$. To find the average of x and a , calculate $\frac{(a-4)+a}{2}$, or $\frac{2a-4}{2}$, or $a - 2$.
- (e) Unless we assume, as (e) says, that the light produced by the lamp and the bulb is approximately equal, the evidence of the author’s argument is meaningless.
- (a) When you’re asked for the author’s point, be careful not to be misled by choices that simply re-state a part of the author’s argument. (b), (c) and (d) might be partly true, but the point of the author’s argument is (a).
- (b) The key to questions like this (which are common) is to keep a close eye on exactly what quantities the percentages refer to. If the richest one percent are making much more money than they once did, then the actual amount of money they pay in federal taxes can increase.
- (d) When an introductory phrase is set off by a comma, make sure it logically refers to what follows.
- (b) In everyday speech, you can get away with “I have a lot of pressure at work,” when you mean “I am under pressure.” On the QMAT, use the correct idiomatic phrase.
- (c) In questions like this, temporarily ignore words set off in dashes. In the original sentence, the subject is “each,” a singular noun that requires a singular verb. In (c), subject and verb agree in number.
- (c) “And so,” “to do so,” and similar uses of the word “so” are often used in GMAT English. Because they’re infrequently used even in written English, they may sound wrong, but (c) is the best answer.
- (b) This is the only choice that encompasses the clearly-expressed topic, scope, and point of view.
- (b) Technical skills are not an issue for all women. Since this is a factor in all but (b), all other options – (a), (c), (d), and (e) – can be eliminated.
- (b) Finding the right answer is simpler when you narrow your reference to the last paragraph, as the question says.
- C. We need both statements 1 and 2. Since statement 2 gives us a value for b , we can substitute that value into the equation given in statement 1. This allows us to determine the value of a .
- A. The formula for the area of a rectangle is area = length \times width. Here we have: area = $a \times b$. We can answer the question without determining a or b . We multiply both sides by b . This gives us $2ab = 15$. Now we can divide both sides by 2 and get a value for ab .
- D. If the two expressions are equal, and if the bases are equal, then the exponents must be equal; therefore $(2m + 1) = (n + 2)$. Knowing this, we can use either statement 1 or 2 to solve the problem.
- B. Keep in mind the difference between ratios and actual numbers. Statement 2 is sufficient because $\frac{2}{5}$ is a comparison by division; it is a ratio. There are 2 women for every 5 men, or a 5:2 ratio of men to women.