

# Humanities & Social Sciences Reasoning



## Introduction

This section of the GAMSAT assesses cognitive facility in the comprehension and interpretation of concepts embedded in both social and cultural milieus. Among the different styles of texts that the candidate may encounter will be various writings of a personal, imaginative, expository and argumentative nature. While most of the exam material will be based on written passages, some will present concepts in graphic or tabular form. The exam material will encompass various public and academic matters, with a focus on socio-cultural, personal and interpersonal themes.

The Reasoning in Humanities and Social Sciences section requires different levels of complex verbal processing and conceptual thinking, logical and plausible reasoning, and objective and subjective thinking.

Questions that focus on *understanding* will call for the ability to identify implicit and explicit meanings within the passage by detailed inspection of words and phrases, as well as more broad interpretation of text.

Questions that focus on *plausible reasoning* will require the candidate to connect and extend various ideas, broaden concepts and arrive at conclusions.

Questions that focus on *critical thinking* will require the candidate to draw distinctions and pass judgements within the boundaries of reason and evidence.

The questions in the Humanities and Social sciences Reasoning section will be multiple-choice, and the candidate must select the most correct answer from four alternatives. This section of the GAMSAT involves 75 questions and requires 100 minutes.

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## Textual Paraphrasing and Annotation

*Cognitive interaction with written material sustains concentration. As you read through and answer the numerous GAMSAT "Prose Questions" that complete this subsection, test your comprehension by summarising each paragraph with a sentence or paraphrasing.*

*Below, note the paraphrasings that follow each paragraph. Ultimately, you must learn to mentally summarise the essential ideas and arguments contained within GAMSAT prose passages as you proceed through them at a good pace. Begin with written paraphrasings, however, to develop the skill. Read this passage and answer the associated questions:*

5 Doing good is doing for another person what, if he were able to follow (self-interested) reason, he would do for himself. Doing evil is doing to another person what it would be contrary to reason for him to do to himself. Harming another, hurting another, doing to another what he dislikes having done to him are the specific forms this takes. Killing, cruelty, inflicting pain, maiming, torturing, deceiving, cheating, rape, adultery are instances of this sort of behaviour. They all violate the condition of "reversibility," that is, that the behaviour in question must be acceptable to a person whether he is at the "giving" or "receiving" end of it.

*Acceptable behaviour is doing to others as we would have them do to ourselves – this is reversibility.*

10 It is important to see just what is established by this condition of being for the good of everyone alike. In the first place, anyone who engages in nonreversible behaviour is doing something wrong. It is irrelevant whether he knows that it is wrong or not, whether the morality of his group recognises it or not. Such behaviour is "wrong in itself," irrespective of individual or social recognition, irrespective of the consequences it has. Moreover, every single act of such behaviour is wrong. We need not consider the whole group or the whole of humanity engaging in this sort of behaviour, but only a single case. Hence we can say that  
15 all nonreversible behaviour is morally wrong; hence that anyone engaging in it is doing what, prima facie, he ought not to do. We need not consider whether this sort of behaviour has harmful consequences, whether it is forbidden by the morality of the man's group, or whether he himself thinks it wrong.

*Non-reversible behaviour is always wrong independent of consequences, culture, circumstances.*

20 The principle of reversibility does not merely impose certain prohibitions on a moral agent, but also certain positive injunctions. It is, for instance, wrong – an omission – not to help another person when he is in need and when we are in a position to help him .... Note that it is wrong – not merely not meritorious – to omit to help others when they are in need and when you are in a position to help them. It does not follow from this, however, that it is wrong not to promote the greatest good of the greatest number, or not to promote the greatest  
25 amount of good in the world .... We do not have a duty to do good to others or to ourselves, or to others and/or to ourselves in a judicious mixture such that it produces the greatest possible amount of good in the world. We are morally required to do good only to those who are actually in need of our assistance. The view that we always ought to do the optimistic act, or whenever we have no more stringent duty to perform, would have the absurd result that  
30 we are doing wrong whenever we are relaxing, since on those occasions there will always be opportunities to produce greater good than we can by relaxing. For the relief of suffering is always a greater good than mere enjoyment. Yet it is quite plain that the worker who, after a tiring day, puts on his slippers and listens to the radio is not doing anything he ought not to, is not neglecting any of his duties, even though it may be perfectly true that there are  
35 things he might do which produce more good in the world, even for himself, than merely relaxing by the fireside.

From Kurt Baier, *The Moral Point of View: A Rational Basis of Ethics*. © 1965 by Random House, Inc.

*Each of us is always required to help an individual in need, but this does **not** mean that we have to be doing the greatest good for the whole world all the time.*

## Question Analysis

Below, notice the question–identifiers that precede each question and the annotations that follow each multiple-choice-answer (known as distractors). When marking the “Prose Questions” that you undertake at the conclusion of this subsection, attempt to identify each question-type and validate each distractor as below. This exercise, while demanding, will help you recognise recurring patterns and build cognitive skills to improve your performance.

### Meaning of Word or Phrase Question

- 1 Judging from the context, an *optimific* act (line 28) could best be defined as one that:
- A violates no stringent duties. (*out of context lines 28 – 29*)
  - B provides assistance to someone in need. (*too specific but not incorrect—not the best answer*)
  - C produces the greatest amount of good in the world. (*suggested by lines 23 – 27—best answer*)
  - D maximises the enjoyment of the person who performs it. (*irrelevant point in the context of this question*)

### Situation or Content Question

- 2 Which of the following is a claim made by the author but NOT supported in the passage by evidence, explanation, or example?
- A The principle of reversibility imposes injunctions as well as prohibitions. (*lines 19 – 20*)
  - B We do not have a duty to do good to others or to ourselves in a judicious mixture such that it produces the greatest possible amount of good in the world. (*lines 25 – 27*)
  - C The view that we always ought to do the optimific act, or whenever we have no more stringent duty to perform, would have the result that we are wrong whenever we are relaxing. (*lines 28 – 31*)
  - D The relief of suffering is always a greater good than mere enjoyment. (*lines 31 – 32, but no supporting evidence offered*)

### Logical Structure Question

- 3 The author claims that it is at least sometimes not morally wrong to relax. In order to avoid an inconsistency with the rest of the passage, the author must therefore *deny* that:
- A relaxation is useless. (*utility is not linked to moral rectitude*)
  - B relaxation never produces the greatest good. (*greatest good is irrelevant*)
  - C everyone is always in a position to help someone else who needs help. (*if this is so, each of us is always obligated to act in order to protect reversibility. Relaxation would be immoral*)
  - D we always want others to act as their duty requires.

### Application Question

- 4 Suppose one knows that a friend’s spouse has committed adultery and must decide whether to lie to the friend about it. According to the passage, it would be morally *wrong* to lie if:
- A no one would want to be lied to under similar circumstances. (*consistent with the “Do unto others” theme of reversibility*)
  - B telling the truth would have better consequences. (*contradicts line 12*)
  - C the lie would have harmful consequences for oneself and others. (*contradicts line 12*)
  - D society opposes lying in such circumstances. (*contradicts line 17*)

**Situation or Content Question**

5 In order to apply the general views about morality stated in the passage to specific situations, it would be most helpful to know:

- A why the author is interested in morality. (*irrelevant to application*)
- B how to determine when someone is truly "in need." (*author must determine who is needy before he can assess the appropriate moral stance toward them*)
- C whether those who do what is morally wrong will be punished. (*punishment never mentioned by author*)
- D how to determine, in a particular case, which act is optimistic. (*not helpful since acts that produce the greatest good for the greatest number are not, according to the passage, our moral obligation*)

**Rhetoric Question**

6 Which of the following general theories would be most in agreement with the theme of the passage?

- A Most people are basically selfish. (*maybe an assumption, but not the main point*)
- B Morality should be concerned with the evaluation of a person's overall character, rather than with the evaluation of particular actions. (*passage stresses action, not intention*)
- C Morality involves granting to others the same status that one grants to oneself. (*paraphrases reversibility*)
- D A person's action cannot be morally wrong unless the person knows that the action is morally wrong. (*contradicts line 10*)

**Situation or Content Question**

7 The central concern of the passage is to:

- A emphasise the absolute importance of morality. (*too general*)
- B propose and explain a criterion for determining what actions are morally wrong. (*author proposes reversibility as the criteria to determine the morality of particular acts*)
- C argue that people should do whatever they can to help each other. (*this passage is not an argument, but rather a description and explanation*)
- D defend the claim that no one likes to be harmed or hurt. (*true, but not the central concern of the passage*)

**Application Question**

8 Suppose that one could save the lives of three people who would otherwise die, but only by sacrificing the life of an innocent bystander who would otherwise survive. On the basis of the passage, what should one do?

- A One should sacrifice the innocent bystander. (*preserving the greater good is contrary to the passage*)
- B One should not sacrifice the innocent bystander. (*consistent with reversibility but proscriptive rather than prescriptive*)
- C One should request additional information about the people in question. (*lines 11 – 12 say that the identity of people is not relevant*)
- D The passage does not give a clear answer about what to do in this case.

**Situation or Content Question**

- 9 Many ethical theories allow for *supererogatory* acts, that is, acts that are morally good but are not required by duty. Which of the following acts would most likely be seen by the author as a supererogatory act?
- A Helping an accident victim who is seriously injured. (*required by duty, lines 20–21*)
  - B Bringing pleasure to someone who is not in need. (*paragraph 3 says that we are morally required to do good only to those who are actually in need*)
  - C Giving money to a worthy charity when one can conveniently do so. (*need is contrary to convenience*)
  - D Trying to harm someone but accidentally helping that person. (*contrary to reversibility*)

Sample Only

## Analysing Social Science

This section of GAMSAT examines not only comprehension of the humanities, but also comprehension of fundamental concepts in social science. Knowledge in new environments will be presented, requiring translation between symbolic forms, construction of hypotheses, extrapolation and interpolation, formulation of generalisations with respect to established relationships, deduction of consequences from given situational representations, data analysis, exposing relationships, drawing comparisons, and making extended deductions. Exam material appears in various formats, including graphical and tabular representations of data.

Common modes of data representation are reviewed here:

### Types of Data

Data are of two kinds:

- **Continuous data** consist of *measurements*, such as the area of classrooms. Measurements of classroom area are continuous data because each datum can take any number of values between the narrowest and the widest.
- **Discrete data** consist of *counts* because there are no intermediates between adjacent values. Counting student numbers in classrooms, for instance, would be assessing discrete data (a classroom cannot contain 2.5 students!).

## Bar Charts

The salience of connecting points in a line graph is that it enables estimation of values between points (interpolation). A bar graph is used when there are no intermediates, either because a variable is discrete or because it cannot be quantified.

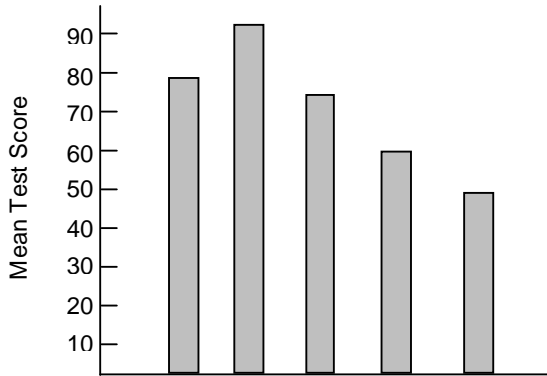


Figure shows the average test score for five Australian cities. Although averages are continuous data because they can take any values, cities are not quantities, so the horizontal axis does not represent a scale.

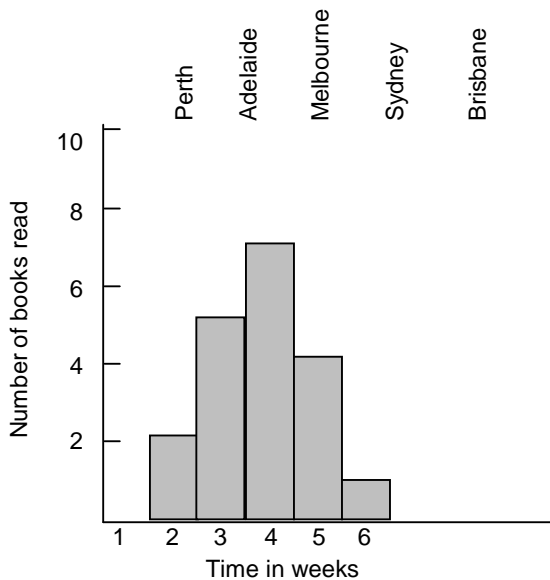


Figure shows the number of books read by students over successive weeks. The x axis does express a continuous variable (time), but the number of books can take only discrete values.

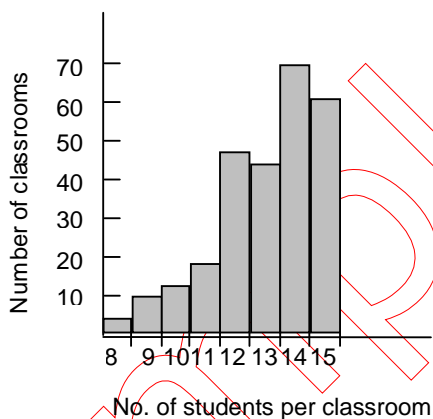
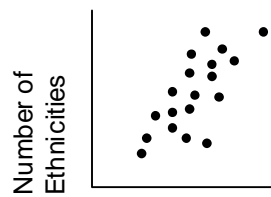


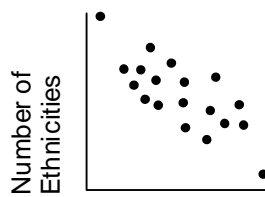
Figure shows the variation in classroom population, the columns representing frequencies of classrooms with increasing numbers of students. Although this is a frequency distribution it is not a histogram, since student numbers cannot take on intermediate values.

## Scattergrams



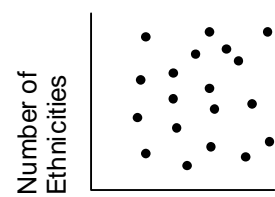
City size

**Positive correlation**



City pollutant level

**Negative correlation**



City shape

**No correlation**

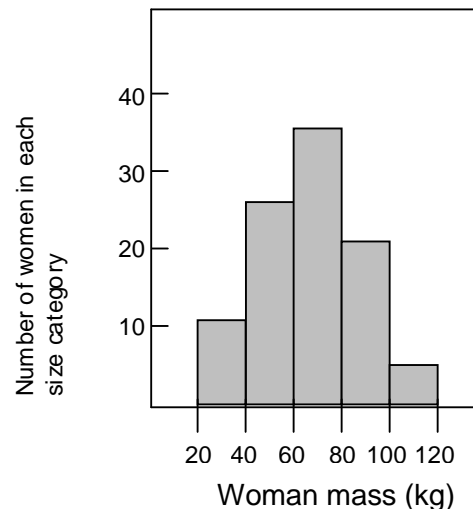
A scattergram is used to show whether two variables are correlated – if the value of one is an indication of the value of the other. For example, is there any relationship between the size of cities and the number of ethnicities of people in those cities? To make a determination, the area of a significant number of cities ought to be measured and, for each one, a record of the number of ethnicities must be made. If the hypothesis is that city size affects the number of ethnicities (rather than the reverse), it would be logical to regard city size as the independent variable and plot it on the horizontal axis. Each city would be represented by a point on the graph, but the points should not be connected.

Whether variables are correlated depends upon the way the points are clustered. In the “city size versus ethnicity” example above, there is an evident trend for larger cities to have more ethnicities. The two variables are said to be *positively correlated*. If the distribution of dots illustrated the reverse trend, the data would indicate a *negative correlation*. For example, as the city pollutant level rises, the number of ethnicities decreases.

The stronger the correlation the more the dots tend to be clustered along a line. When a correlation is absolute, all the points lie along a line so that for every value of one variable, the value of the other can be precisely predicted. If the line is straight the relationship is said to be *linear*. Many predictable relationships, however are non-linear. If there is no correlation the points are randomly scattered. For example, there is no evident correlation between changes in city shape and number of ethnicities.

In many cases a correlation may not be strong enough to emerge clearly on a graph. In such instances, statistical methods must be used to determine whether there is any correlation. When two variables are correlated, this may indicate that one is a cause of the other. Of course, there may be no causal connection, or alternatively, both variables may be related to a separate causative agent.

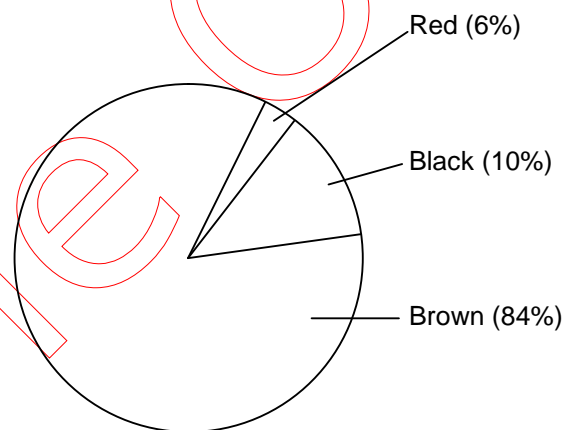
## Histograms



A histogram is used to illustrate the relative frequency of distinct measurements of a measurable phenomenon (like women's weight) *and is used only with continuous data*. When plotting a histogram, measurements are first divided up into classes.

- The figures on the x axis denote the boundaries between categories or intervals (i.e. 20 kg between boundaries).
- The width of each column is proportional to the size of the interval. If the area under the entire graph is equated to 1, the area of each column indicates the proportion of measurements falling into that interval.
- The columns must touch, distinguishing histograms from bar charts.

## Pie Charts



A pie chart is a graph used to indicate the percentages of various constituents of a whole. For example the proportions of skin tones among Caucasian sun-burn patients that are brown, black, and red can be illustrated well on a pie chart. For instance, brown forms about 84% and is therefore represented by a segment with an angle of 84% of 360°, or 302°.