



# BRAINWORKS INTERNATIONAL PTY LTD

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*Numerical Reasoning*

Year 6



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### 1. Introduction

What is numerical reasoning?

It is not the same as mathematics, despite that it involves numbers. Numerical reasoning is about using numerical data to make reasoned decisions and problem solve. It relies on the ability to recognise how to go about solving a numerical problem, understanding the relationships between numbers, prior to completing the mathematical calculation required. The sum, product, how much larger and how many times larger are examples of relationships.

The data can be presented in text, tables and even graphs.

### 2. Examination Formats

The following exam formats include a numerical reasoning component.

#### **EduTest**

**Allwell**, as part of a general abilities test

**NSW selective test** as part of a general abilities test

**Melbourne High, MacRobertson Girls' High, Nossal High and Cory High (EduTest)**

The numerical reasoning test is generally of 30 minutes duration and the number of problems included depends on the year level and is generally around 30, but can be as high as 50 for higher year levels.

The sample questions included are appropriate for a year 6 level examination.



### 3. Sample Questions- Numerical Reasoning

#### Question 1

The next two numbers in this sequence are

1   1   2   3   5   8

- A**   12, 17      **B**   13, 19      **C**   13, 21      **D**   None of these

#### Question 2

The next number in this sequence is

$\frac{1}{8}$     $\frac{1}{4}$     $\frac{1}{2}$    1   2   4

- A**   7      **B**   6      **C**   8      **D**   9

#### Question 3

The incorrect number in this sequence is

1.04   1.025   1.01   0.95   0.98   0.965

- A**   1.01      **B**   1.025      **C**   0.95      **D**   None of these

#### Question 4

The numbers in the grid are arranged in patterns. Use the numbers to find the value of z.

2		8
3	z	
6		48

z =

- A**   5      **B**   2      **C**   3      **D**   4

#### Question 5

The numbers in the grid are arranged in patterns. Use the numbers to find the value of ?.

3	2	8	7	9	5
5	1	25	?	29	13

? =

- A**   23      **B**   28      **C**   22      **D**   21



### Question 6

There are a total of 27 dogs and chickens in a backyard. Altogether there are 86 legs. How many dogs are there?

- A** 12                      **B** 16                      **C** 18                      **D** 20

### Question 7

Tiffany is three times as old as her brother Luke but in 8 years Luke will be half of Tiffany's age. How old is Tiffany now?

- A** 10                      **B** 16                      **C** 20                      **D** 24

### Question 8

The sum of 4 consecutive numbers is 4,346. The second number is

- A** 1232                      **B** 1099                      **C** 1086                      **D** 1089

### Question 9

One rock melon weighs the same as two mangos or five apples. Six rock melons will weigh the same as:

- A** Ten mangos and ten apples  
**B** Two mangos and twenty apples  
**C** Six mangos and fifteen apples  
**D** Eight mangos and five apples

### Question 10

If it takes 9 people 4 hours to dig a trench, if I now had 2 people how many hours is needed to dig a trench of the same size?

- A** 10 hours                      **B** 18 hours                      **C** 12 hours                      **D** 16 hours

### Answers

1. C	4. B	7. D
2. C	5. D	8. C
3. C	6. B	9. C
		10. B