



**ISA**  
**Mathematical Literacy**  
**Sample Materials**

**Grade 3**

**Grade 4**

**Grade 5**

**Sample**



# ISA Mathematical Literacy Sample Materials

## Grade 3, Grade 4 and Grade 5

This collection of mathematical literacy sample materials represents a typical range of mathematics material in ISA tests from Grade 3 to Grade 5. The purpose of this collection is to show teachers examples of the kinds of mathematical literacy that are used in the ISA.

### *Questions in context*

This collection has 5 Units containing a total of 11 questions. Each Unit establishes a context for the questions associated with it. An actual ISA mathematical literacy test has 15-20 Units set in a wide variety of contexts, with a total of 30-35 questions.

The pages following the sample Units show the classification, descriptor and marking guide for each question.

### *Classification of questions*

Questions are classified by competency –  
Reproduction, Connection or Reflection  
and by content –  
Quantity, Change and Relationships, Space and Shape, or Uncertainty.

### *Question descriptors*

The *descriptors* for each question provide the basis for the described scales of achievement on which ISA results are reported.

### *Question format*

This collection has 5 multiple-choice questions and 6 open-ended questions requiring students to write a response. An actual ISA test has approximately 50 per cent multiple-choice questions and 50 per cent open-ended questions. Some of the open-ended questions only require a short answer, others require a calculation or an explanation. Examples of both kinds of open-ended questions are included. The marking guide shows how the open-ended questions are scored.

### **This collection of materials is not a test.**

The materials in this collection have NOT been selected to represent the typical range of difficulty of an ISA test. An actual ISA test is carefully constructed to ensure that the range of difficulty of the questions reflects the range of mathematical ability of the population for each grade.

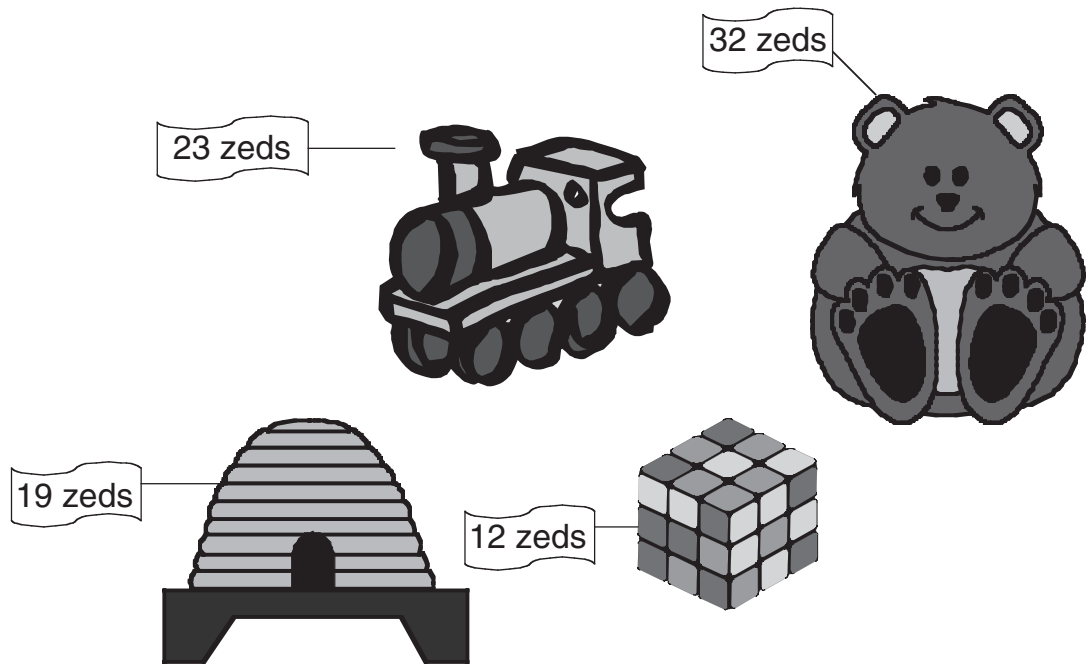
The materials in this collection cover Grades 3, 4 and 5. Some materials may be too hard for Grade 3 and some materials may be too easy for Grade 5. If a teacher wants to use some of these materials for students to practise on, it is important that the teacher only selects the Units that are of an appropriate level of difficulty for their students.

Teachers should use this material as a model. Teachers can develop questions that assess similar kinds of skills using their own mathematics materials.

Other ISA Sample Mathematical Literacy Collections:

- Grades 5, 6 and 7
- Grades 7, 8, 9 and 10.

# Toy Prices



L03011

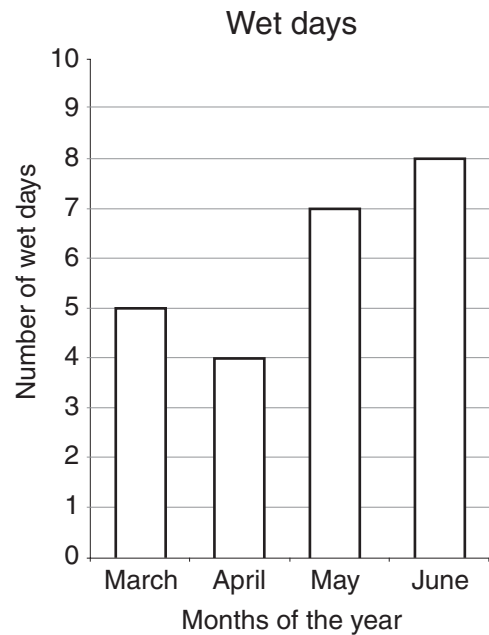
1

Toys at the shop cost 32 zeds, 12 zeds, 19 zeds and 23 zeds.  
Write these prices in **increasing** order.

\_\_\_\_\_ zeds,    \_\_\_\_\_ zeds,    \_\_\_\_\_ zeds,    \_\_\_\_\_ zeds.

# Wet Days

This graph shows the number of wet days during March, April, May and June.



LI3071

**2**

Which two months together had 13 wet days?

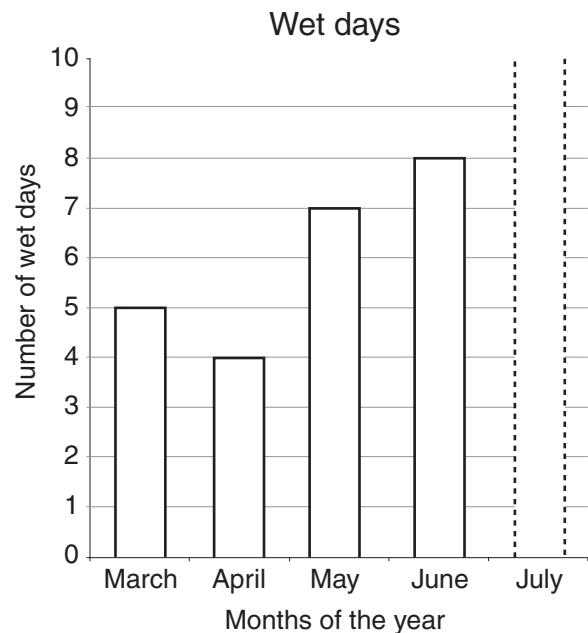
- March and April
- April and May
- May and June
- March and June

LI3072

**3**

In July there were nine wet days.

Complete the graph to include July.



LI3073

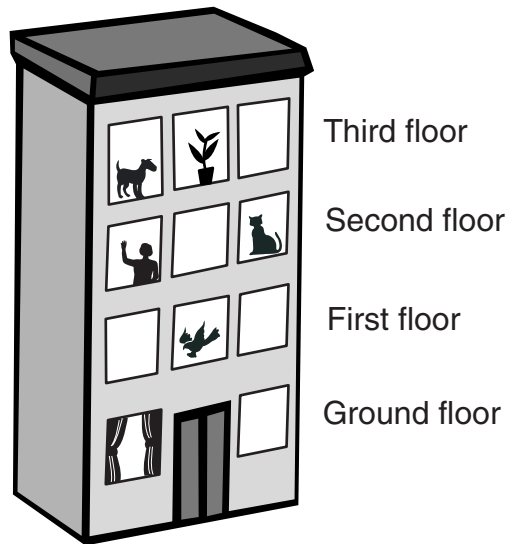
**4**

Which month had the smallest number of wet days?

- March
- April
- May
- June

# The Windows





Teresa looked in the windows of the apartment across her street.  
This is what she saw.



M051111


5

What can be seen in the second floor window third from the left?

- 
- 
- 
- 

M051112

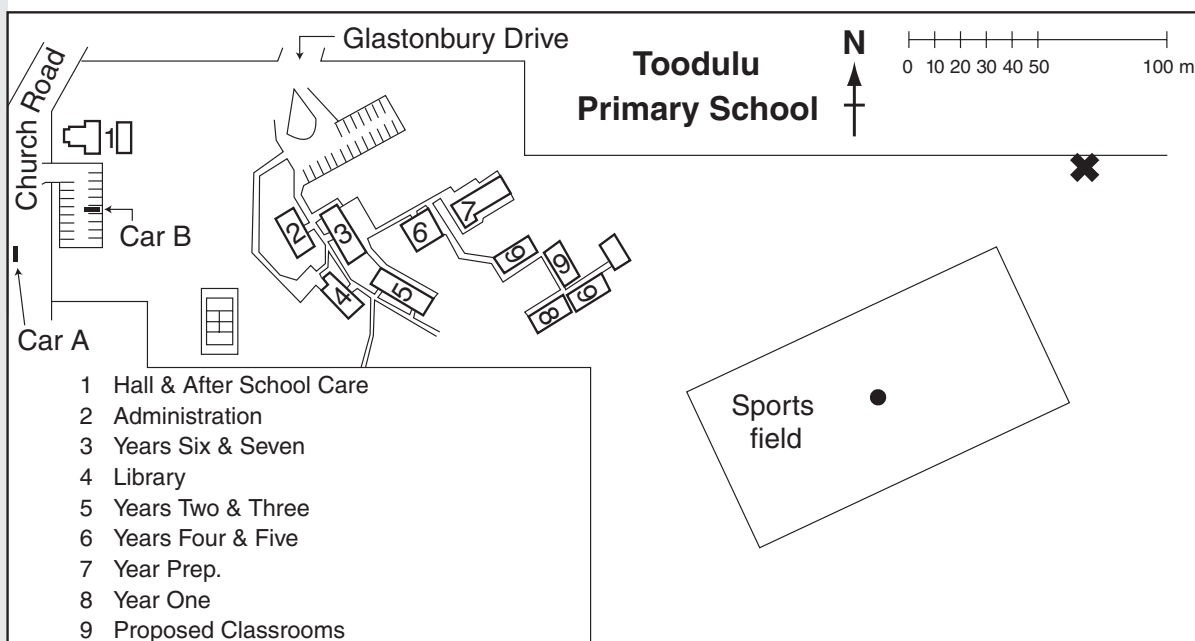
6

Which window has a  in it?

- The ground floor window, first from the left
- The first floor window, second from the right
- The second floor window, second from the left
- The third floor window, first from the left
- The third floor window, second from the left

# Treasure Hunt

A teacher has organised a Treasure Hunt for her class.  
This is a map of the school.



S35014

- 7** About how far do the students need to walk from the centre of the sports field to the treasure at ✕?

\_\_\_\_\_ m

S35013

- 8** A driver in Car A, heading north on Church Road, wishes to enter the car park off Church Road and park next to Car B.  
Which turns should the driver make?

- Turn left, turn left, turn right
- Turn right, turn left, turn right
- Turn right, turn left, turn left
- Turn right, turn right, turn left
- Turn right, turn right, turn right

# Bean Plant



Week 1   Week 2   Week 3   Week 4

Angelique measured the height of a bean plant each Saturday for four weeks.

Her measurements are shown in the table.

Week	Date	Height
1	March 1	2 cm
2	March 8	8 cm
3	March 15	14 cm
4	March 22	20 cm

Use this calendar to answer the next two questions.

March						
S	M	T	W	T	F	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

April						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31



# Bean Plant

S33031

**9** What height would you expect Angelique's plant to be on Saturday April 5 if it keeps growing in the same way?

\_\_\_\_\_ cm

S33032

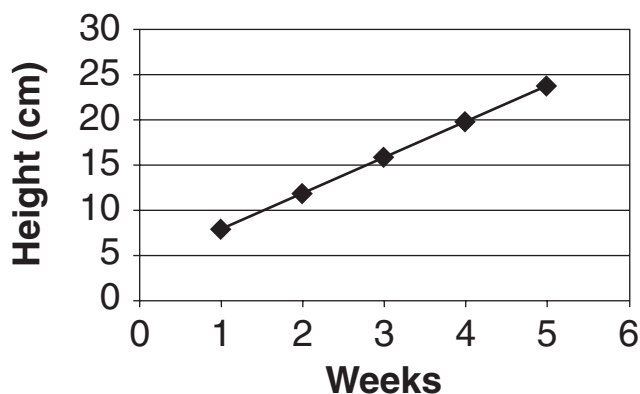
**10** On what **date** would you expect Angelique's plant to reach 50 cm if it keeps growing in the same way?

\_\_\_\_\_

Angelique's friend Emile started measuring a different bean plant on Saturday in Week 1 also.

He decided to make a graph of the growth of his plant.

**Emile's plant growth**



S33034

**11** In which week did Angelique's plant have the **same** height as Emile's plant?

\_\_\_\_\_



## TOY PRICES

**Q1** Toys at the shop cost 32 zeds, 12 zeds, 19 zeds and 23 zeds. Write these prices in increasing order.

*Competency:* Reproduction

*Content:* Quantity

*Descriptor:* List four 2-digit numbers in increasing order.

### Marking guide

**Code 2** 12, 19, 23, 32

**Code 1** 32, 23, 19, 12 (decreasing order)

**Code 0** Other

**Code 9** Missing

## WET DAYS

**Q2** Which two months together had 13 wet days?

*Competency:* Reproduction

*Content:* Uncertainty

*Descriptor:* Find two columns that add to a given value on a simple column graph.

*Key:* D – March and June

**Q3** In July there were nine wet days.

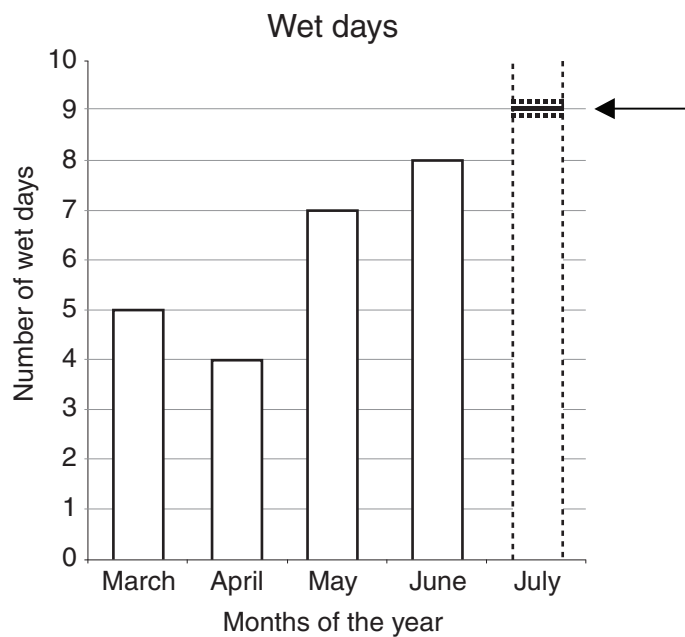
**Complete the graph to include July.**

*Competency:* Reproduction

*Content:* Uncertainty

*Descriptor:* Completes a bar graph to represent a given frequency.

## Marking Guide



**Code 1** As shown (line added)  
Dotted lines show acceptable range

**Code 0** Other

**Code 9** Missing

**Q4** Which month had the smallest number of wet days?

*Competency:* Reproduction

*Content:* Uncertainty

*Descriptor:* Find the least frequent category by interpreting a simple column graph.

*Key:* B – April


## THE WINDOWS

**Q5** What can be seen in the second floor window third from the left?

*Competency:* Reproduction

*Content:* Shape and Space

*Descriptor:* Use location language to identify position.

*Key:* 

**Q6** Which window has a  in it?

*Competency:* Reproduction

*Content:* Shape and Space

*Descriptor:* Use location language to identify position.

*Key:* D – The third floor window, first from the left

## TREASURE HUNT

**Q7** About how far do the students need to walk from the centre of the sports field to the treasure at ✕?

*Competency:* Connection

*Content:* Shape and Space

*Descriptor:* Estimate distance in metres on a map using a simple scale.

### Marking guide

**Code 1** Any answer between 110 and 130

**Code 0** Other

**Code 9** Missing

**Q8** A driver in Car A, heading north on Church Road, wishes to enter the car park off Church Road and park next to Car B.

**Which turns should the driver make?**

*Competency:* Reproduction

*Content:* Shape and Space

*Descriptor:* Read a map and determine the turn directions (left/right) needed to get from point A to point B.

*Key:* D – Turn right, turn right, turn left

## BEAN PLANT

**Q9** What height would you expect Angelique's plant to be on Saturday April 5 if it keeps growing in the same way?

*Competency:* Reproduction

*Content:* Change and Relationships

*Descriptor:* Find a value on a given date, combining information from a calendar and a table showing a pattern of growth.

### Marking guide

**Code 1** 32

**Code 0** Other, including marks/calculations on the previous page

**Code 9** Missing (i.e. no marks on either page)

**Q10** On what date would you expect Angelique's plant to reach 50 cm if it keeps growing in the same way?

*Competency:* Connection

*Content:* Change and Relationships

*Descriptor:* Given a new value, extrapolate from a table showing a pattern of growth to find a date on a calendar.

### Marking guide

**Code 1** April 26 or just '26' or 'April 20–26'

**Code 0** Other, such as week 9

**Code 9** Missing

**Q11** In which week did Angelique's plant have the same height as Emile's plant?

*Competency:* Connection

*Content:* Change and Relationships

*Descriptor:* Compare growth data in a table with those in a linear graph.

### Marking guide

**Code 1** Week 4 (or just '4') or March 22

**Code 0** Other

**Code 9** Missing