8. MATHEMATICS

Results of Primary 3 Mathematics in TSA 2010

The Territory-wide percentage of P.3 students achieving Mathematics Basic Competency in TSA 2010 was 87%. The proportion achieving basic competency in 2010 was almost the same as that in 2007 and 2008.

Primary 3 Assessment Design

The assessment tasks for P.3 were based on the *Basic Competency at the end of KS1 for the Mathematics Curriculum (Trial Version)* and the *Mathematics Curriculum Guide (P1 – P6), 2000.* The tasks covered the four Dimensions of the Mathematics Primary 1 to 3 curriculum, i.e. Number, Measures, Shape & Space and Data Handling, testing the concepts, knowledge, skills and applications relevant to these areas.

The Assessment included a number of formats according to the context of the question, including fill in the blanks, answers only and answers involving working steps as well as multiple choice. Some of the test items consisted of sub-items. Besides finding the correct answers, students were also tested on the ability to present their solutions to problems, including writing out necessary statements, mathematical expressions and explanations.

The Assessment consisted of 115 test items (196 score points) covering the four Dimensions. These items were grouped into four sub-papers, each 40 minutes in duration and covered all four Dimensions. Some items appeared in more than one sub-paper to act as inter-paper links. Each student was required to attempt only one of the four sub-papers.

Since some Basic Competencies in the Number, Measures, and Shape & Space Dimensions are common for both Key Stages 1 and 2, four items (four score points) testing these common Basic Competencies were purposely set to be the same in both P.3 and P.6 Assessments. Such measures provided a common basis to compare the performance of P.3 and P.6 students on the same Basic Competencies.

The composition of the four sub-papers is illustrated as follows:

Table 8.1 Composition of the Sub-papers

Sub-paper	No. of Items (Score Points)				
	Number Dimension	Measures Dimension	Shape & Space Dimension	Data Handling Dimension	Total
M1	18(22)	7(12)	9(19)	2(7)	36(60)
M2	18(22)	11(18)	7(17)	2(5)	38(62)
M3	21(27)	7(17)	5(11)	2(6)	35(61)
M4	14(19)	13(18)	8(17)	2(7)	37(61)
Total *	53(68)	31(53)	24(53)	7(22)	115(196)

* Items that appear in two different sub-papers are counted once only.

Performance of P.3 Students with Minimally Acceptable Levels of Basic Competence in TSA 2010

P.3 Number Dimension

Students performed satisfactorily in this Dimension. They could understand the basic concepts of whole numbers and simple fractions. Students were good at performing addition, subtraction and multiplication of whole numbers as well as mixed operations. However, some students found it difficult in doing division of whole numbers (including remainder) and using a fraction to represent parts of a whole. In solving application problems including monetary calculations, students in general could demonstrate clear working steps in presenting their solutions. Further comments on students' performance are provided below with examples from different sub-papers quoted in brackets.

Understanding basic concepts of numbers and fractions

- The majority of students were capable of recognising the place values of digits in a whole number (e.g. Q1/M1; Q1/M3; Q1/M4), ordering whole numbers in ascending order (e.g. Q3/M4) and forming a whole number with given digits according to specific conditions (e.g. Q3/M3).

- Most students were capable of reading numbers expressed in words (e.g. Q2/M1; Q2/M4).

Q2/M4
用阿拉伯數字寫出「二萬零六十」這個數。 答案：20060

- The majority of students could write numbers shown on an abacus or express Arabic numerals in words (e.g. Q3/M1; Q2/M3). However, some students could not write the numbers in words properly as shown below:

Q2/M3: 18 000
一萬八千零零零 元

- Most students understood the basic concept of fractions (e.g. Q11/M1; Q11(a)/M3; Q15/M4) and could recognize the relationship between fractions and the whole (e.g. Q12/M3). They could use fractions when the whole was divided into a number of equal parts (e.g. Q10/M1). However, a considerable number of students were not knowledgeable enough to handle fractions representing parts of a whole (e.g. 11(b)/M3; Q15/M3).
- The majority of students were able to compare fractions with the same numerator (e.g. Q15/M1) as well as those with the same denominator (e.g. Q13/M3).

Performing basic calculations on whole numbers

- Addition – Most students performed well in the addition of whole numbers (e.g. Q4/M1). They could handle three-digit numbers with repeated addition and carrying (e.g. Q4/M4) as well as the commutative property of addition (e.g. Q4/M3).
- Subtraction – A majority of students performed well in the subtraction of whole numbers up to 3 digits involving decomposition and repeated subtraction (e.g. Q5/M1; Q5/M4). In Q5/M3, a few students chose B as the answer because they just did the subtraction inside the brackets. Such careless mistakes could be avoided.
- Multiplication – Students did well in the multiplication of whole numbers up to 1 digit

by 3 digits involving carrying (e.g. Q7/M1; Q6/M3) and repeated multiplication (e.g. Q7/M3). In Q6/M4, a few students chose C as the answer; the might have mistaken the value of the zero in the tens place as 10 in their calculations.

- Division – Students performed division satisfactorily with divisor one digit and dividend 3 digits (e.g. Q8/M1; Q8/M3; Q7/M4). In Q6/M1, a small number of students chose option D because they missed a place holder in the tens place of the quotient and misplaced it in the units place.

Q6/M1
以下哪一項是正確的？ ○ A. $7\overline{)749}$ 17 ○ B. $7\overline{)749}$ 17 ○ C. $7\overline{)749}$ 107 ● D. $7\overline{)749}$ 170

- Mixed operations – A majority of students could perform mixed operations of addition and subtraction (e.g. Q8/M4) and involving small brackets (e.g. Q5/M3; Q9/M3). Many of them performed well with the mixed operations of multiplication and addition/subtraction (e.g. Q9/M1). In Q9/M4, a few students chose D because they were not aware of the computational rule of doing ‘multiplication/division before addition/subtraction’.

Solving application problems

- P.3 students in general were capable of understanding and solving simple problems involving addition and subtraction (e.g. Q13/M1; Q13/M2; Q11/M4). They could also solve straightforward problems involving multiplication (e.g. Q15/M2; Q12/M4) and mixed operations (e.g. Q18/M1; Q16/M2; Q17/M2). In Q17/M1, some students were careless in doing subtraction or confused the subtrahend with the minuend in writing a subtraction expression.

Q17/M1	
應找回： 50−(8×3) =36(元)	8×3−50 =26(元)

- For problems with more complicated contexts, many students were either careless in reading the question or weak in comprehending the situation (e.g. Q18/M2; Q14/M3). Their performance dropped in application problems involving division (e.g. Q16/M1).

Q16/M1
6÷9|2 =12|3 ∴共需出15份。

- Students showed weaknesses in understanding the meaning of the quotient and remainder as a result of division. For example, in Q14/M2, about half of the students mistook the quotient as the answer and ignored the remainder.
- Students in general could handle familiar item types but they would easily misunderstand some questions due to sloppiness (e.g. Q18/M2).

Q18/M2
80-(30+5) =80-35 =45 ∴賣去菠蘿45公斤。

- A majority of students were able to solve application problems involving the calculation of money (e.g. Q12/M1; Q10(a)/M3). However, some students were not able to perform division involving conversion of dollars to cents (e.g. Q10(b)/M3; Q10/M4).
- Many students could present their solutions with working steps in solving application problems. However, some students were not able to deduce or explain their answers logically (see examples of students' work below).

  (a) Incomplete working steps:

Q11/M4	Q18/M2
還餘下熱已急品： 950-622-238 =328 =90(分)	10×(8-3)-5 =10×5 =50-5 =45 ∴共賣45公斤。

Q20/M3
共付: 260 + (260 - 25) = 260 + = 495 (元)

(b) Incorrect working steps:

Q11/M4
還餘下紀念品= 950-(62+238 =50(份)

(c) Inadequate explanatory statements: no descriptions or conclusions were provided and the explanations were not clear enough.

Q20/M3
260 - 25 + 260 = 135 + 260 = 395

Q16/M1
每段需先: 912 ÷ 6 = 152(個)

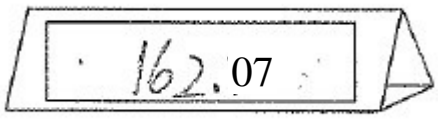
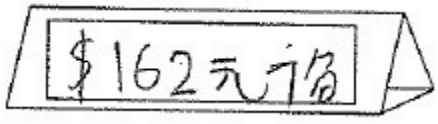
P.3 Measures Dimension

The performance of students was satisfactory in this Dimension. Most students could identify and use Hong Kong money, read price tags, and, as compared with students in the past, had shown a slight improvement in filling in price tags. They were also capable of comparing directly the length, weight and capacity of objects and record the length of objects. Students could use appropriate units of measurements for recording the length and weight of objects, and choose appropriate tools for measuring length but were weak in choosing appropriate tools for measuring the weight of objects.

Students in general were able to tell the time on a clock face and a digital clock, but their performance was rather weak in telling the dates and days of the week, identifying dates correctly with a given duration of an activity and recording the duration of activities. Further comments on students' performance are provided below with examples from different sub-papers quoted in brackets.

Knowledge of Hong Kong money

- Many students could identify and use Hong Kong money (e.g. Q19/M1; Q25(b)/M2). Almost all students could read price tags (e.g. Q16(a)/M4) but some of them still had difficulty at filling in the prices on price tags (e.g. Q25(a)/M2). A few students either forgot to include the dollar sign or were unable to express cents properly (see examples of students' work below).

<table>
<tr><td colspan="2">Q19/M1</td></tr>
<tr><td colspan="2">入場券共值 278 元 0 角。
入場券共值 278 元 00 角。</td></tr>
<tr><td colspan="2">Q25(a)/M2</td></tr>
<tr><td>  </td><td>  </td></tr>
</table>

- Many students could exchange money directly (e.g. Q24/M3), but some students were still weak in finding the change required when simple calculations were involved (e.g. Q16(b)/M4).

Knowledge of time

- Some students were unable to deduce the date of the previous month from the calendar given (e.g. Q21(a)/M2; Q25(b)/M3). Almost half the number of students could not identify the start date/end date of an activity with a given duration of the activity (e.g. Q21(b)/M2), a few students counted 13th of August as the start date and gave 17th August as the end date of the activity. In Q25(a)/M3, a few students did not read the questions carefully and gave 22nd September as the answer. Moreover, a small number of students did not know the number of days in a common year (e.g. Q25(c)/M3).

- The majority of students were good at telling the time on a clock face/digital clock including the '24-hour time' (e.g. Q23(a)&(b)/M1; Q24(a)/M2; Q29(a)/M2), with the exception of Q26(a)/M3, in which some students wrote '59 minutes to 0', '0 minutes to 59' or '59 minutes to 12' instead of '1 minute to 1' (0 時 59 分 in Chinese). Students' performance on reckoning the duration of an activity was acceptable when the time shown is in the format of a digital clock or in '12-hour time' system (e.g. Q24(b)/M2; Q29(b)/M2). But over half of them had difficulties in reckoning the duration of an activity when it involved reading the time on a clock face or including '24-hour time' (e.g. Q23(c)/M1; Q26(b)/M3; Q18/M4).

Measurement of length/distance, weight and capacity

- Most students could compare directly the length/distance of different objects (e.g. Q17/M4) and the weight of three objects by simple deduction (e.g. Q23/M2). The majority of students were capable of comparing directly the capacity of different containers (e.g. Q27/M2). Many of them were also capable of making indirect comparison in weight (e.g. Q25/M1) but did not perform as well in using improvised units to compare the capacity of different containers (e.g. Q28/M2).

- Many students were capable of using a ruler to measure and record the length of an object (e.g. Q19/M2; Q22/M3; Q14/M4) and able to use 'kilometre' to compare the distance between objects (e.g. Q19/M4). The majority of students did well in choosing the appropriate measuring tools for measuring length/distance and capacity of objects (e.g. Q21/M1; Q27/M3), but their performance weakened in choosing the appropriate scales for measuring weight of objects (e.g. Q20/M4). Many students were also capable of using finger width, arm length, foot span etc., as 'ever-ready rulers' for measuring the lengths of objects and the distance between

objects (e.g. Q20/M1) (see example of students' work below).

Q22/M3

上圖的絲帶長 12.2 毫米，它的長度與一條長 12 厘米的絲帶相差 2 毫米。

- The majority of students were able to record the weight of an object using 'gram' or 'kilogram' (e.g. Q28(a)/M3) but their performance was poor when they had to calculate the difference in weight of objects placed on different weighing scales with different measuring units (e.g. Q28(b)/M3). Besides, only half the number of students was capable of recording the weight of an object with a correct unit (e.g. Q22/M2). Students did well in measuring and comparing the capacity of containers using different measurement units (e.g. Q26/M1) but their performance declined when it involved calculating the difference in capacity (e.g.Q26/M2).
- Students in general did well in choosing suitable measurement units for recording length (e.g. Q22(a)&(c)&(d)/M1; Q20(a)&(b)/M2) and weight (e.g. Q22(b)/M1; Q20(c)&(d)/M2; Q26(a)&(b)/M4), though few students were unable to write the measurement units in words or symbols correctly (see examples of students' work below).

Q22/M1

(b) 一個羽毛球  重約 5 安 。

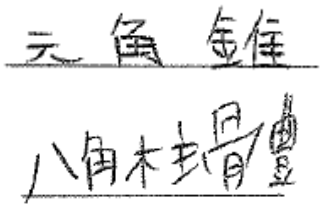
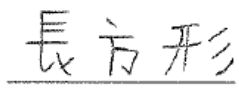
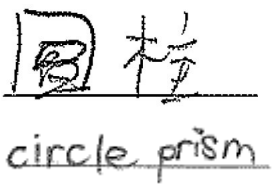
(d) 戲院規定小童  身高 1 米 或以上必須購票。

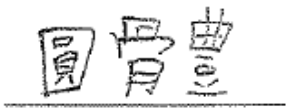
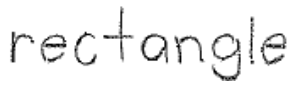
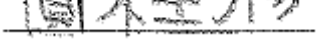
P.3 Shape & Space Dimension

The performance of students was fair in this Dimension. They were capable of identifying 2-D and 3-D shapes which they usually used in classroom learning, though some of them had difficulty in writing the answer in Chinese or English correctly. They could recognize straight lines, curves, perpendicular lines, angles, the four directions and draw sets of parallel or perpendicular lines, but they had difficulty in identifying parallel lines in 2-D shapes. Further comments on students' performance are provided below with examples from different sub-papers quoted in brackets.

3-D shapes

Students were capable in naming and identifying 3-D shapes including prisms, pyramids, cylinders, cones and spheres (e.g. Q27(a)&(b)&(d)/M1; Q32/M2; Q34(b)&(c)&(d)/M2). They did well in identifying 3-D shapes of real-life objects (e.g. Q30/M3). But their performance dropped when they had to name and identify 3-D shapes that were unfamiliar (e.g.Q27(c)/M1; 34(a)/M2). Only half the number of students could name the 3-D shapes in Q29/M3. Some students attempted to name the 3-D shapes by specifying the shapes of their bases, though it was not required in the framework of Basic Competencies in Key Stage 1. Students made spelling mistakes or gave incorrect Chinese in naming 3-D shapes (see examples of students' work below).

<table>
<tr><td colspan="2">Q27/M1</td></tr>
<tr><td>(a)
  </td><td>(b)
  </td></tr>
<tr><td>(c)
  </td><td>(d)
  </td></tr>
</table>

Q32/M2	
(a) 	(b) 
(c) 	(d) 

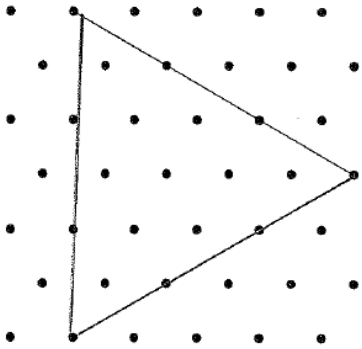
2-D shapes

- Many students could identify, group or name 2-D shapes including triangles, rectangles, parallelograms, trapeziums, pentagons and hexagons (e.g. Q28(a)&Q29(a)/M1; Q33/M2; Q21/M4; Q27(b)/M4; Q28(a)&(b)/M4). However, some of them had difficulty in naming and identifying rhombuses (e.g. Q29(b)/M1; Q30/M2). Few of them were unable to name parallelograms and trapeziums correctly, these shapes were usually incorrectly named as 'four-sided shape' (「梯形/平行四邊形」as「四邊形/四角形」) (e.g. Q29(a)/M1; Q21(a)/M4). Also, their performance dropped significantly in indentifying isosceles triangles (e.g. Q24/M1; Q31/M2), a few of them gave scalene/right-angled isosceles triangles (「不等邊/直角等腰三角形」) as the answer. Similar to 3-D shapes, students made spelling mistakes or gave incorrect Chinese in naming 2-D shapes (see examples of students' work below).

Q29/M1
(a) 
(b) 

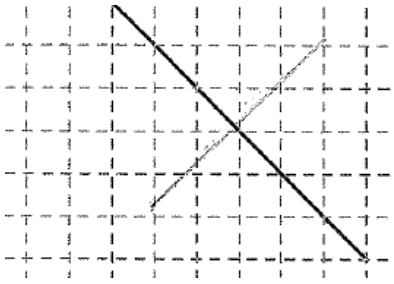
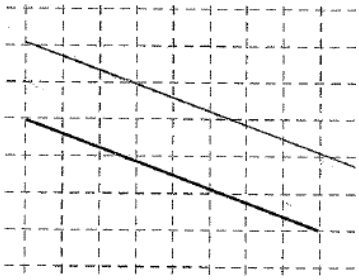
Q31/M2
不等邊 三角形。 acute triangle. 等腰 三角形。

- A considerable number of students could draw an equilateral triangle on a pin-board paper (e.g. Q31/M3) (see example of students' work below).

Q31/M3


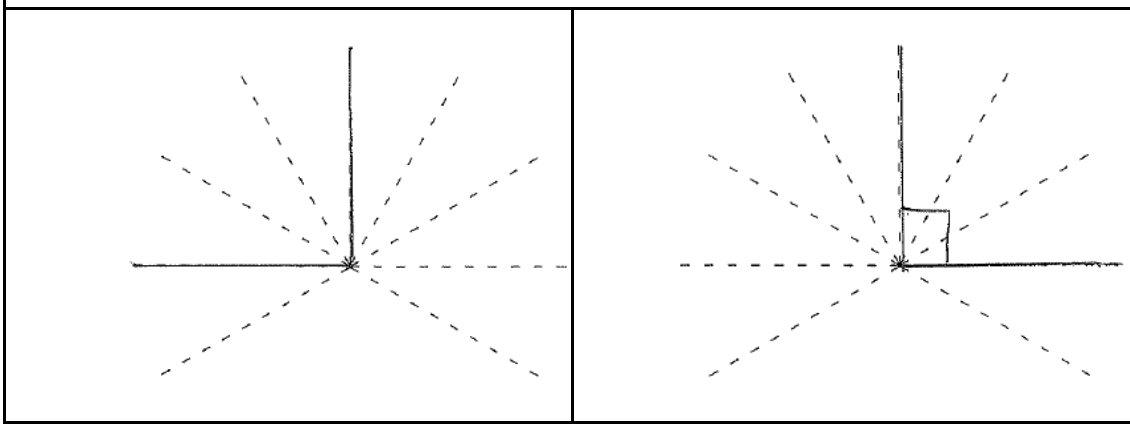
Lines, angles and the four directions

- Students did well in identifying straight lines and curves (e.g. Q32/M1; Q27(a)/M4). Many students were able to draw parallel lines and perpendicular lines in specific formats (e.g. Q30/M1; Q35/M2), but were less capable when they were asked to identify parallel lines in 2-D shapes (e.g. Q32(a)/M3). (see examples of students' work below).

Q30/M1	
	

- Students did well in recognizing right angles and drawing right angles in specific formats (e.g. Q31/M1; Q36(a)/M2; Q32(b)/M3). Also, the majority of them were able to compare the size of angles (e.g. Q33/M1; Q36(b)/M2) (see examples of students' work below).

Q31/M1



- Students in general did well in recognizing the four directions (e.g. Q34/M1; Q33/M3). Few students were unable to write the four directions in words correctly (see examples of students' work below).

Q34/M1

(a)

帳蓬在繩索橋的 ___南___ 方。

(c)

大偉由紅樹林前往鱷魚潭，他應先向 ___東___ 方走，經過 ___急流___，再往 ___北___ 方走就可到達。

大偉由紅樹林前往鱷魚潭，他應先向 ___東___ 方走，經過 ___急流___，再往 ___北___ 方走就可到達。

Q33/M3

(a)

'Crystal Ball' is to the ___nouth___ (direction) of 'Cotton Candy'.

P.3 Data Handling Dimension

Students performed well in Data Handling Dimension. They could read information from the data given in pictograms. They could interpret data and make use of them to answer straightforward questions. They were also capable of constructing pictograms from tabulated data. Further comments on students' performance are provided below with examples from different sub-papers quoted in brackets.

Reading and interpreting pictograms

- P.3 students were good at reading the data given in pictograms to answer straightforward questions (e.g. Q35(a)&(b)/M1; Q37(a)/M2; Q35(a)&(b)/M3; Q37(a)&(b)/M4). However, few students were not able to compare the data in the pictogram or carry out simple calculations (e.g. Q35(c)/M1; Q37(b)&(c)/M2; Q37(c)&(d)/M4).
- Regarding open-ended questions, a considerable number of students could not analyse the data given in a pictogram correctly (e.g. Q35(c)/M3). Their reasoning was not based on the factual data given in the pictogram. For example, the first sample below shows a misinterpretation of the data (as the books available) while the second is irrelevant to the data provided.

Q35/M3

根據以上象形圖的數據，你認為 3A 班應多買哪類圖書？為甚麼？

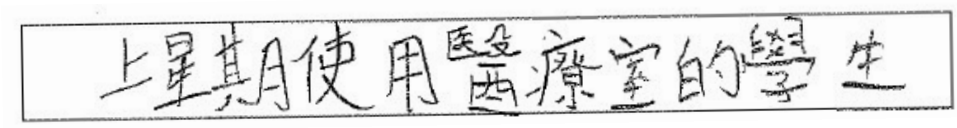
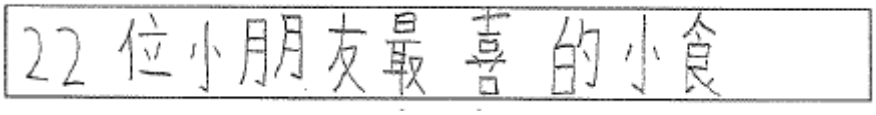
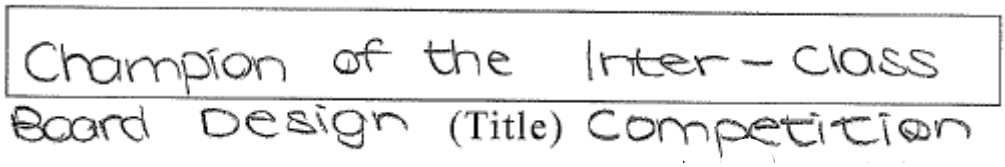
答案：3A 班應多買 英文 書，因為 英文書只有兩本。。

根據以上象形圖的數據，你認為 3A 班應多買哪類圖書？為甚麼？

答案：3A 班應多買 英文 書，因為 可以讓他們多學知識。。

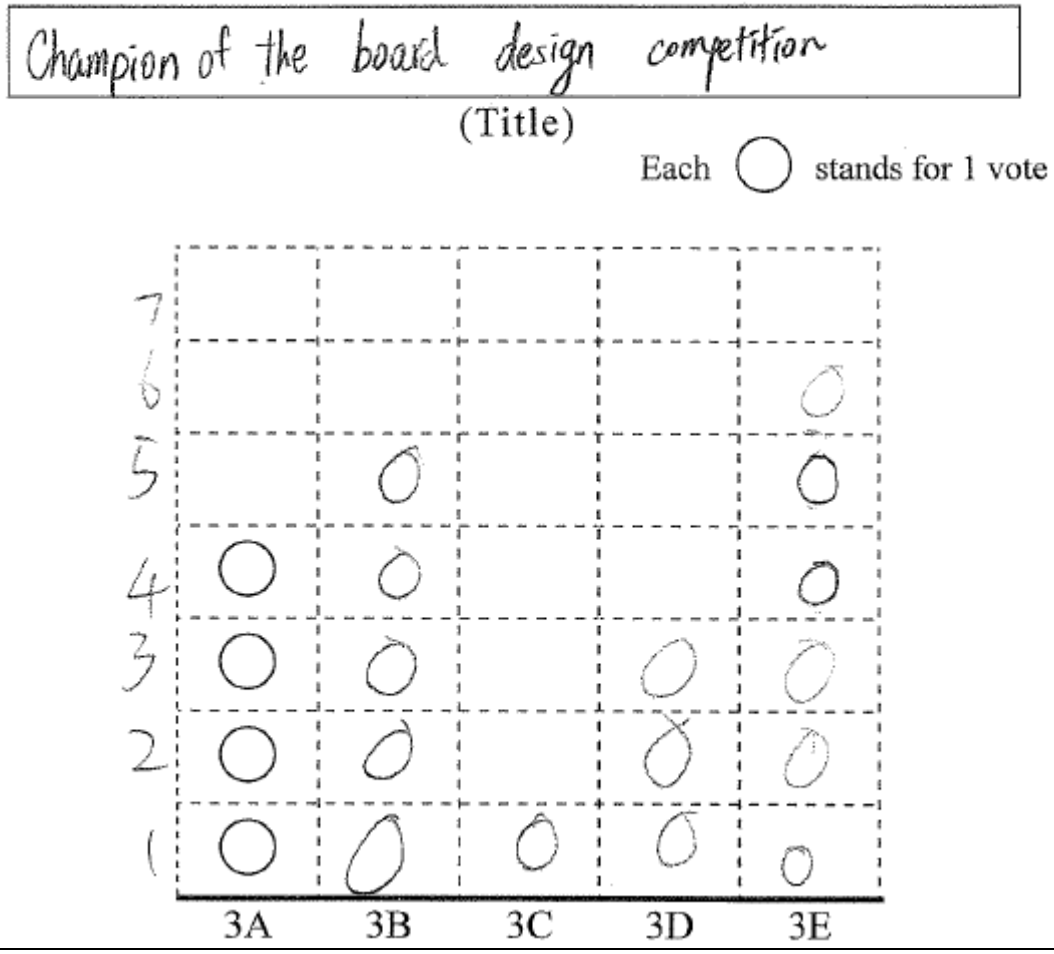
Constructing pictograms

- Most students were capable of constructing pictograms from a table of raw data and providing a proper title for a pictogram (e.g. Q38/M2; Q36/M4). They could also name the correct categories on the vertical axis of a pictogram in rows (e.g. Q36/M1). However, many students were careless in reading the questions and they missed the keywords or used the wrong keywords for the titles.

Q36/M1: Keywords were ambiguous (should include 'number of pupils')

Q38/M2: Keywords should include 'favourite snacks'

Q34(b)/M3: Wrong keywords (confused 'voting result' with 'champion')


- Some students drew the pictogram untidily and represented the data with a frequency axis (see examples of students' work below).

Q34/M3



General Comments on P.3 Student Performances

The overall performance of P.3 students was good. Students demonstrated mastery of basic concepts and computational skills of foundational mathematics in Key Stage 1.

The performance of P.3 students was consistently good across the Number and Data Handling Dimensions. They were capable of solving simple application problems and presenting proper working steps for their solutions. They showed weaknesses in handling the remainder involved in divisions. The majority of students could read and interpret simple pictograms and performed well in constructing pictograms from tabulated data. However, some students could not make good use of the data provided by a pictogram to answer questions that required reasoning beyond simple reading.

For Measures Dimension and Shape & Space Dimension, students generally performed steadily in areas such as Hong Kong money, lines, angles, four directions, identifying, grouping and naming 3-D and 2-D shapes, telling the time on a clock face/digital clock. However, their performance was relatively weak in the following areas: identifying the sets of parallel lines, reading the scale of measuring instruments accurately as well as giving correct units, choosing appropriate scales for measuring weight of objects, identifying the start/end date of an activity with a given duration, and recording the duration for activities.

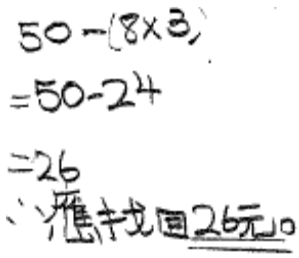
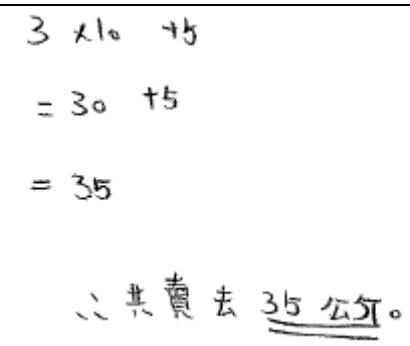
In general, P.3 students had little difficulty solving familiar problems. But sometimes they did not complete the task as required because they may have misread instructions or drawn conclusions based on their intuition or usual practices without mathematically sound reasoning. As a result, their performance tended to decline slightly for test items that were less familiar or required higher order thinking.

Best performance of P.3 Students in TSA 2010

Students sitting for each sub-paper were ranked according to their scores and the performances of approximately the top 10% were singled out for further analysis. The performances of these students are described below.

Among these students, almost half of them achieved a full score or lost at most three score points in the whole assessment. That is, they demonstrated an almost complete mastery of the concepts and skills being assessed by the sub-papers they attempted.

The best performing students were also good at arithmetic calculations involving mixed operations. When solving application problems they could present their solutions with working steps and explanatory statements (see examples of students' work below).

Q17/M1

Q18/M2


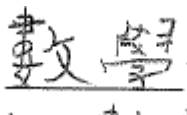
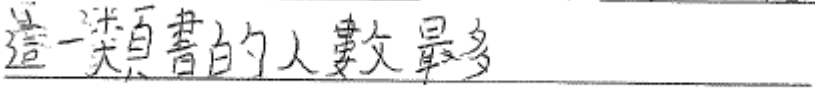
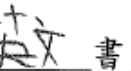
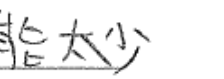
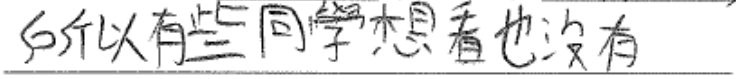
The best performing students demonstrated sufficient understanding of the concept of fractions. They were capable of recognizing the relationship between fractions and the whole as well as comparing fractions.

The best performing students performed well in using and exchanging Hong Kong money, using suitable measurement units for recording length/distance and weight, and reading the scale of a measuring instrument accurately. They were very good at recording the duration of time for activities, comparing directly and indirectly the length/distance, weight and capacity of objects.

These students were also capable at identifying and naming accurately 3-D and 2-D shapes, identifying straight lines, curves, parallel lines and perpendicular lines as well as recognizing the four directions. They were also capable of identifying right angles and comparing sizes of angles. Many of these students were able to use specific mathematical terms correctly other than simply naming prism or pyramid when identifying different types of prisms and pyramids. For example, triangular prism (六角錐體) in Q27(a)/M1, though these mathematical terms were not included in the framework of Basic Competency of Key Stage 1 (see example of students' work below).

Q27/M1
(a) 答案： 

The best performing students were capable of reading and interpreting the data given in pictograms as well as constructing pictograms according to supplied data. They could analyze data and extract information from a pictogram to explain their answers reasonably well (see examples of students' work below).

Q35(c)/M3
According to the data shown in the pictogram above, which kind of books should be bought for Class 3A? Why? Answer: More Mathematics books should be bought for Class 3A because many pupils like reading it.
答案：3A 班應多買  書，因為     。
答案：3A 班應多買  書，因為     。

In spite of the more than satisfactory performance of most students, some had common weaknesses as described below:

- In Q13/M4, some students were unable to answer 'non-standard' application problems.
- In Q11(b)/M3 and Q15/M3, some students did not grasp the concept of fractions thoroughly.
- In Q21(a)/M2; Q25(a)/M3, some students were unable to tell the dates and days of a week and identify dates correctly with a given duration of an activity.
- In Q31/M2, almost half the number of students could not identify and name the isosceles triangle.
- In Q34(a)/M2, quite a number of students had difficulty in identifying all prisms.
- In Q20/M4, almost half the number of students could not choose the appropriate scale for measuring the weight of given object.
- In Q35(c)/M3, some students did not make use of the data given in the pictogram to answer open-ended questions.

Comparison of Student Performances in Mathematics at Primary 3 TSA 2007, 2008 and 2010

The percentages of students achieving Basic Competency in 2007, 2008 and 2010 are provided below.

Table 8.2 Percentages of P.3 Students Achieving Mathematics Basic Competency in 2007, 2008 and 2010#

Year	% of Students Achieving Mathematics Basic Competency
2007	86.9
2008	86.9
2010	87.0

Due to Human Swine Influenza causing the suspension of primary schools in June 2009, the TSA was cancelled and no data has been provided.

A comparison of the strengths and weaknesses of P.3 students in TSA 2007, 2008 and 2010 provides useful information on how teachers can help students improve their learning. The following provides a comparison of the students' performances in each of the four Dimensions for the last three years.

Number Dimension

- In 2010, the overall performance of P.3 students in the Number Dimension was better than that of 2007 to 2008.
- Students performed well at concepts of place values and mixed operations involving whole numbers.
- Students had stable performance in solving simple application problems but varied in presenting their working. However, students' weak performance in application problems involving division was apparent.
- Invalid answers were given in solving problems involving the calculation of money which showed that some P.3 students might not have relevant experiences in daily life.
- Students performed well in understanding the concept of fractions and comparison of fractions.

Measures Dimension

- The overall performance of 2010 students in the Measures Dimension was about the same as in 2007 and 2008.
- Students performed steadily in exchanging and using money.
- Compared to previous years, students showed a slight decline in performance with test items pertaining to telling the dates from a calendar and the start date/end date of an activity.
- Similar to previous years, students in 2010 had good performance in telling time on a clock face/digital clock but were rather weak in recording the duration of activities.
- Student in 2010 performed steadily in measuring and comparing length/distance and choosing suitable measuring units for recording length and weight of objects and good at comparing the weight of objects using improvised units. However, they were weak in choosing appropriate measuring tools for measuring weight and recording the weight of an object with an appropriate measurement unit.
- Similar to previous years, a few students still had difficulty in writing measurement units in Chinese correctly.

Shapes & Space Dimension

- In 2010, the overall performance of students in the Shapes & Space Dimension was about the same as in 2007 and 2008.
- Students performed at about the same level as in previous years in identifying, naming and grouping 3-D or 2-D shapes, though some of them still had difficulty in identifying and naming rhombuses and 3-D shapes.
- Compared to previous years, students in 2010 did not perform as well in identifying, naming and drawing different types of triangles.
- Students performed at the same level as in previous years in identifying straight lines, curves, parallel lines and perpendicular lines, but were weak in identifying parallel lines in 2-D shapes.
- Students showed a steady performance this year in recognizing right angles and comparing the sizes of angles.
- Students showed a slight improvement in recognizing the four directions.
- As in previous years, a few of the students in 2010 were still unable to write the names of 3-D or 2-D shapes correctly.

Data Handling Dimension

- In 2010, the overall performance of P.3 students in the Data Handling Dimension was better than that of 2007 and 2008.
- Students performed well in reading and interpreting pictograms but were not capable of synthesizing and analyzing data in answering open-ended questions.
- The majority of students could construct pictograms but when adding a title to a pictogram, they were reading the question too hastily and did not understand its meaning.