Continual Assessment & Semestral Assessment

Mathematics

Practical Periodic Revision For Primary Students

NOW WITH STEP-BY-STEP WORKED SOLUTIONS!

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Wayne T

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6

Name: _____

Class: _____

SAMPLE

CA & SA MATHEMATICS 6

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PREFACE

CA & SA Mathematics 6 is designed to assess **Primary 6** students in their understanding and application of concepts, skills and processes in the mathematics paper. The trial test papers are written in accordance to the latest mathematics examination format. Altogether, there are 8 trial test papers: 2 sets of CA1, 2 sets of SA1, 2 sets of CA2 and 2 sets of SA2.

Each trial test paper consists of two written papers which test the students' competency in mathematical concepts, procedural skills for numerical calculation, and process skills to reason, connect, think and apply.

Paper 1 is divided into two booklets. **Booklet A**, which consists of 15 multiple-choice questions, tests on the students' mathematical knowledge and comprehension ability. **Booklet B** consists of 15 short-answer questions, which tests on the students' mathematical knowledge, comprehension and application & analysis abilities.

Paper 2 consists of 5 short-answer questions and 13 structured / long answer questions, which tests on the students' mathematical knowledge, comprehension, application & analysis abilities. Students are encouraged to apply different thinking skills and heuristics in solving the routine or non-routine word problems.

Joe T Shamuraq
B.Sc., (Hons)

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CONTENTS

1st HALF OF THE SCHOOL YEAR

Trial Test 1 (CA 1).....1-16
Tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 2 (CA 1).....1-16
Tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 3 (SA 1).....1-16
Practice examination which tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 4 (SA 1).....1-16
Practice examination which tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

2nd HALF OF THE SCHOOL YEAR

Trial Test 5 (CA 2).....1-16
Tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
Speed
Circles
Pie Charts
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 6 (CA 2).....1-16
Tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
Speed
Circles
Pie Charts
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 7 (SA 2).....1-16
Practice examination which tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
Speed
Circles
Pie Charts
Area and Perimeter
Volume of Solids and Liquids
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

Trial Test 8 (SA 2).....1-16
Practice examination which tests on mental calculation, mathematical knowledge, comprehension, application & analysis with focus on:
Algebra
Angles in Geometric Figures
Nets
Fractions
Ratio
Percentage
Speed
Circles
Pie Charts
Area and Perimeter
Volume of Solids and Liquids
This Trial Test also revises the concepts learnt in Primary 1 to Primary 5.

WORKED SOLUTIONS 1-23

SAMPLE

Name	Class	Date

Primary 6

MATHEMATICS

TRIAL TEST *1* (CA 1)

INSTRUCTIONS

PAPER 1 (The use of calculators is **not** allowed.)

Total time for Booklets A and B: 50 min

BOOKLET A: MULTIPLE–CHOICE [20 marks]

BOOKLET B: SHORT–ANSWER [20 marks]

PAPER 2 (The use of calculators is allowed.)

Time for Paper 2: 1 h 40 min

SHORT-ANSWER [10 marks]

STRUCTURED / LONG–ANSWER [50 marks]

PAPER	BOOKLET	MARKS
1	A	/ 20
	B	/ 20
2		/ 10
		/ 50
TOTAL		/ 100

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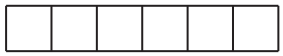
PAPER 1 (BOOKLET A)

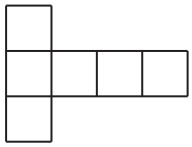
Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, choose the correct answer and write its number (1, 2, 3 or 4) in the brackets provided. [20 m]

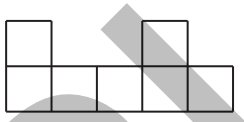
1. Shirlee had $\$m$. She bought a chocolate bar for \$1.20. How much money had she left?

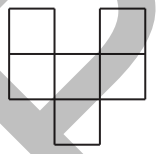
(1) $\$(m - 1.20)$
(2) $\$(1.20 - m)$
(3) $\$(m + 1.20)$
(4) $\$1.20m$
( )

2. Which of the following shows the correct net of a cube?

(1) 

(2) 

(3) 

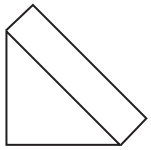
(4) 

( )

3. Jane has \$2.40. Alison has \$3.60. Find the ratio of the amount of money Alison has to the amount of money Jane has.

(1) 2 : 3
(2) 3 : 2
(3) 4 : 9
(4) 9 : 4
( )

4. How many flat faces does the solid have?



(1) 3
(2) 4
(3) 5
(4) 6
( )

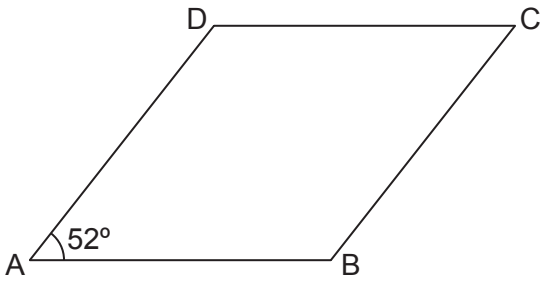
5. Simplify $12a + 15 - 7a - 12 + a$.

(1) $5a - 3$
(2) $6a + 3$
(3) $6a + 27$
(4) $20a - 3$
( )

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6. ABCD is a rhombus, not drawn to scale. Find ∇DCB.



(1) 26°
(2) 38°
(3) 52°
(4) 128°
( )

7. Sam and David shared a sum of money in the ratio 5 : 9. If David received $180 more than Sam, what was the sum of money?

(1) $225
(2) $405
(3) $630
(4) $675
( )

8. A cuboid has _____ faces and most of the faces are _____.

(1) 4, rectangles
(2) 4, squares
(3) 6, rectangles
(4) 6, squares
( )

9. Find the value of $\frac{4p - 3}{3}$ when $p = 6$.

(1) 7
(2) 9
(3) 21
(4) 27
( )

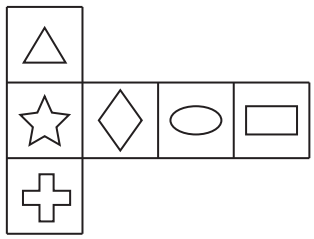
10. Mr Watt had $1000. He gave $300 to his wife and gave the remaining money to his son and daughter in the ratio 3 : 2. How much did his son receive?

(1) $140
(2) $280
(3) $350
(4) $420
( )

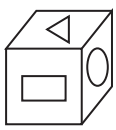
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11. Look at the net carefully.



Which of the following shows the correct solid formed when the above net is folded?

(1) 

(2) 

(3) 

(4) 

( )

12. Jeremy bought 12 erasers and 2 pens. Each eraser cost $\$x$ and each pen cost \$2. How much did he pay altogether?

(1) $\$12x$
(2) $\$(12x + 4)$
(3) $\$(14x + 2)$
(4) $\$14x$

( )

13. The average of a set of eight numbers is 32. If numbers 40 and 44 are added to the set, what will be the new average?

(1) 32
(2) 34
(3) 38
(4) 42.5

( )

14. Mrs Brown bought some trays of eggs at 150¢ per tray. She gave the cashier x ¢ and received 50¢ in change. Find the number of trays of eggs Mrs Brown bought in terms of x.

(1) $\frac{x + 50}{150}$
(2) $\frac{x - 50}{150}$
(3) $1.50x + 50$
(4) $50x - 150$

( )

15. To carry a sack of cement, 2 workers are needed. How many workers are needed to carry 100 such sacks of cement at the same time?

(1) 50
(2) 100
(3) 150
(4) 200

( )

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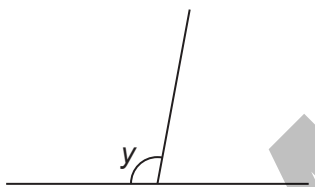
PAPER 1 (BOOKLET B)

Questions 16 to 25 carry 1 mark each. Questions 26 to 30 carry 2 marks each. For questions 26 to 30, show your working clearly in the space given. Write your answers on the lines provided. For questions that require units, these units are provided. Give your answers in the stated units. [20 m]

16. Express 34 : 42 in its simplest form.

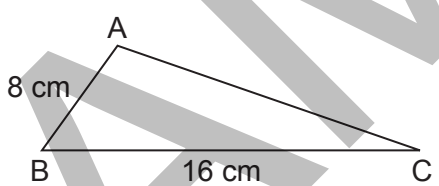
Ans: _____

17. Measure ∇y with a protractor. ∇y = _____.



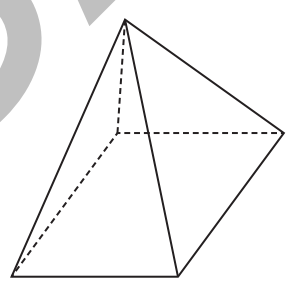
Ans: _____°

18. The perimeter of triangle ABC is 36 cm. Find the length of AC.



Ans: _____ cm

19. Identify the solid shown below.



Ans: _____

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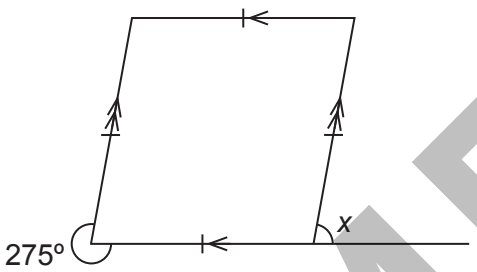
20. Simplify $9x + 5 - 3x - 1 - x$.

Ans: _____

21. Mrs Smith baked n muffins. She placed 5 muffins in each box. How many boxes of muffins did she have?

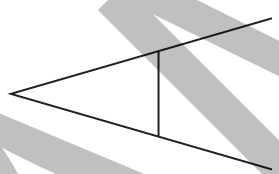
Ans: _____

22. The figure below is not drawn to scale. Find ∇x.

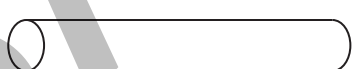


Ans: _____°

23. Draw a line of symmetry for the figure below.



24. How many flat faces does the solid below have?



Ans: _____ flat surfaces

25. The ratio of the number of boys to the number of girls in a group is 5 : 9. There are 20 more girls than boys. How many children are there in the group?

Ans: _____ children

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26. Find the value of $\frac{30y + 21}{19}$ when $y = 5$.

Ans: _____

27. Beatrice will be twice as old as she is now in another 7 years. How old will she be in 30 years' time?

Ans: _____ years old

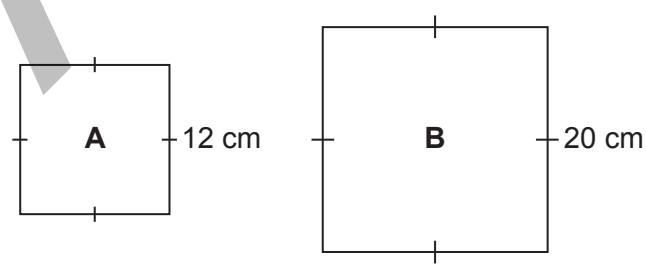
28. A sum of money was shared among Joseph, Elliot and Sarah in the ratio 4 : 5 : 3. If Elliot received $90, find the sum of money.

Ans: $_____

29. A fruiterer will give the customers 3 free oranges if they buy 500 g of cherries. If a customer receives 24 free oranges, how much cherries does he buy?

Ans: _____ kg

30. Find the ratio of the perimeter of Square A to the perimeter of Square B in its simplest form.



Ans: _____

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WORKED SOLUTIONS

CA & SA MATHEMATICS 6

TRIAL TEST 1 (CA1)

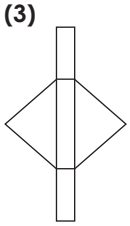
Paper 1

1. (1)
$\$m - \$1.20 = \$(m - 1.20)$

2. (2)

3. (2)
Alison : Jane
\$3.60 : \$2.40
360 : 240
3 : 2

4. (3)



5. (2)
$12a - 7a + a + 15 - 12 = 6a + 3$

6. (3)
$\angle DCB = \angle DAB$
$= 52°$ (opposite angles in a rhombus)

7. (3)
4 units → \$180
1 unit → \$180 ÷ 4 = \$45
14 units → 14 × \$45 = \$630

8. (3)

9. (1)
$$\frac{4p-3}{3} = \frac{4\times 6-3}{3} = \frac{24-3}{3} = \frac{21}{3} = 7$$

10. (4)
\$1000 – \$300 = \$700
5 units → \$700
1 unit → \$700 ÷ 5 = \$140
3 units → \$140 × 3 = \$420

11. (3)

12. (2)
$12 \times \$x + 2 \times \$2 = \$12x + \$4$
$= \$(12x + 4)$

13. (2)
8 × 32 = 256
256 + 40 + 44 = 340
340 ÷ 10 = 34

14. (2)
$$\frac{x¢ - 50¢}{150¢} = \frac{x - 50}{150}$$

15. (4)
100 × 2 = 200

16. 17 : 21
34 : 42 (÷ 2)
17 : 21 (÷ 2)

17. 100

18. 12
36 – 8 – 16 =12 cm

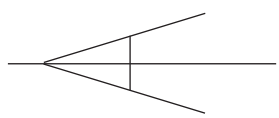
19. pyramid

20. 5x + 4
9x – 3x – x + 5 – 1 = 5x + 4

21. $\frac{n}{5}$
$$\frac{\text{total number of muffins}}{\text{number of muffins in a box}} = \frac{n}{5}$$

22. 85
360° – 275° = 85°
(sum of angles)
180° – 85° = 95°
(angles between two parallel line)
180° – 95° = 85°
(angles on a straight line)

23.



24. 2

25. 70
4 units → 20
1 unit → 20 ÷ 4 = 5
14 units → 14 × 5 = 70

26. 9
$$\frac{30y + 21}{19} = \frac{30\times 5 + 21}{19} = \frac{150 + 21}{19} = \frac{171}{19} = 9$$

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