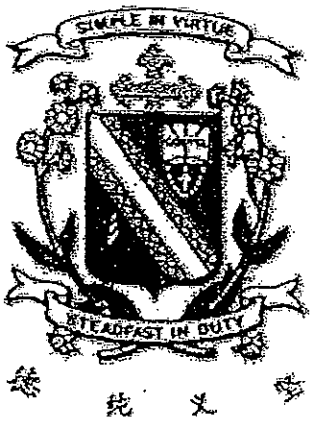
Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)



Primary 6 Mathematics

2013 Semestral Assessment One

Paper 1

Booklet A

13 May 2013

15 QUESTIONS
20 MARKS

TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of 7 printed pages including the cover page.

Questions **1 to 10** carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3, 4) on the Optical Answer Sheet (OAS).

[20 marks]

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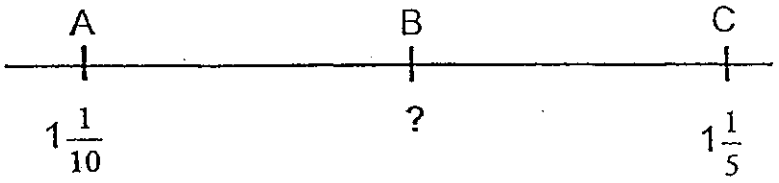
1. In the number line below, AB = BC. What is the value of B?



(1) 1.05

(2) 1.10

(3) 1.15

(4) 1.30

2. Bill bought 2 ℓ of orange juice. Then he spilled 50 cm^3 of it. What percentage of the orange juice did he spill?

(1) 2.5%

(2) 25%

(3) 40%

(4) 97.5%

3. There are 30 teachers in a hall. There are 120 more pupils than teachers. What is the ratio of the number of teachers to the total number of people in the hall?

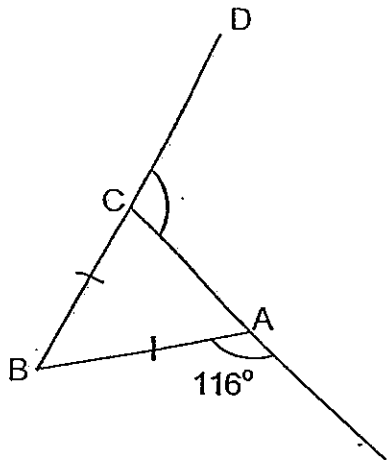
(1) 1 : 3

(2) 1 : 4

(3) 1 : 5

(4) 1 : 6

4. The figure below is not drawn to scale. Given that AB = BC and BD is a straight line, find ∠ACD.



(1) 52°

(2) 64°

(3) 116°

(4) 128°

5. Simplify $5n + 4 - n + 24 \div 4$.

(1) $4n + 7$

(2) $4n + 10$

(3) $6n + 7$

(4) $6n + 10$

6. The amount of money that Joe has to the amount of money that Ken has is 9 : 7. After Joe has spent \$2.80, he has \$1.70 more than Ken. How much money does Ken have?

(1) \$2.25

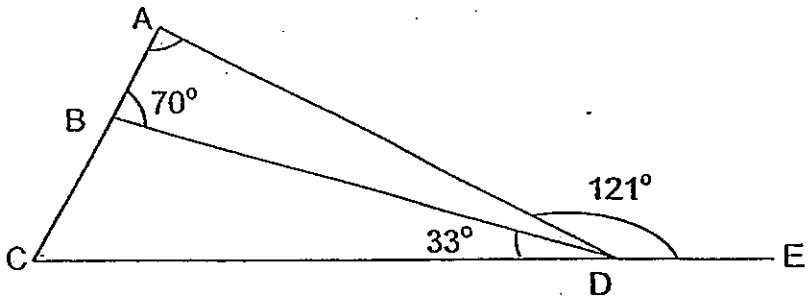
(2) \$4.50

(3) \$15.75

(4) \$20.25

(3)

7. The figure below is not drawn to scale. CDE is a straight line. Find $\angle CAD$.



(1) 26°

(2) 51°

(3) 59°

(4) 84°

8. Wai Peng spent $\frac{1}{6}$ of his money on transport and $\frac{2}{3}$ of the remainder on food. What fraction of his money did he have left?

(1) $\frac{13}{18}$

(2) $\frac{5}{18}$

(3) $\frac{5}{9}$

(4) $\frac{1}{6}$

9. A piece of wire was used to construct the outline of a cuboid 15 cm by 11 cm by 30 cm. What was the total length of wire used for the cuboid?

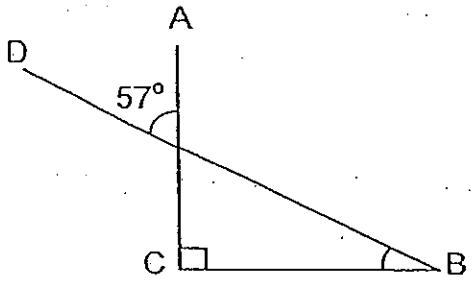
(1) 56 cm

(2) 112 cm

(3) 224 cm

(4) 448 cm

10. The figure is not drawn to scale. AC and DB are straight lines. Find ∠DBC.



(1) 33°

(2) 37°

(3) 43°

(4) 47°

11. 10 cones are placed at equal distances apart in a straight line. The first cone is 180 m apart from the last cone. How far is it between the 4th and the 6th cone?

(1) 60 m

(2) 40 m

(3) 36 m

(4) 20 m

12. The average of five numbers is 13. When one of the numbers is changed to 7, the average of the five numbers becomes 12.2. What is the original number before it is changed to 7?

(1) 3

(2) 7.8

(3) 11

(4) 19.6

13. Ali has 3r marbles. Ben has 6 more marbles than Ali and 2 fewer marbles than Cain. How many marbles do Ali and Cain have altogether?

(1) $6r + 8$

(2) $6r + 4$

(3) $3r + 6$

(4) $3r + 4$

14. Remus had \$140 and he wanted to buy some glasses at \$3.50 each. Then he changed his mind and bought cheaper ones at \$2.80 each. How many more glasses could he buy with the \$140?

(1) 200

(2) 160

(3) 20

(4) 10

15. Mr Sng sold three machines, X, Y and Z, for a total of \$770 000. He sold Machine X at 50% of the price of Machine Y. Then he sold Machine Z at $\frac{1}{3}$ the price of Machine X. At what price did Mr Sng sell Machine X?

(1) \$210 000

(2) \$231 000

(3) \$330 000

(4) \$420 000

End of Booklet A

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2013 Semestral Assessment One

Paper 1

Booklet B

13 May 2013

Booklet A	/ 20
Booklet B	/ 20
Total	/ 40

15 QUESTIONS
20 MARKS

TOTAL TIME FOR BOOKLETS A AND B: 50 MINUTES

INSTRUCTIONS TO CANDIDATES
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of 8 printed pages including the cover page.

Questions **16 to 25** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. [10 marks]

Do not write in this space

16. The area of each face of a cube is 81 cm^2. What is the volume of the cube?

Ans : _____ cm^3

17. Gopal has 84 ℓ of paint. $\frac{3}{4}$ ℓ of paint is needed to paint a bench completely. How many benches can he paint completely?

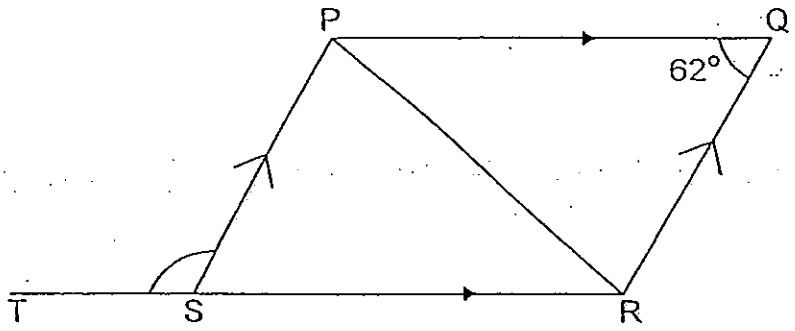
Ans : _____

18. To bake a loaf of bread, Mrs Toh mixes 9 cups of flour with every 4 cups of water. If she uses 24 cups of water, how many cups of flour does she need?

Ans : _____

19. In the figure, PQRS is a parallelogram and TSR is a straight line. Find ∠PST.

Do not write in this space



Ans : _____°

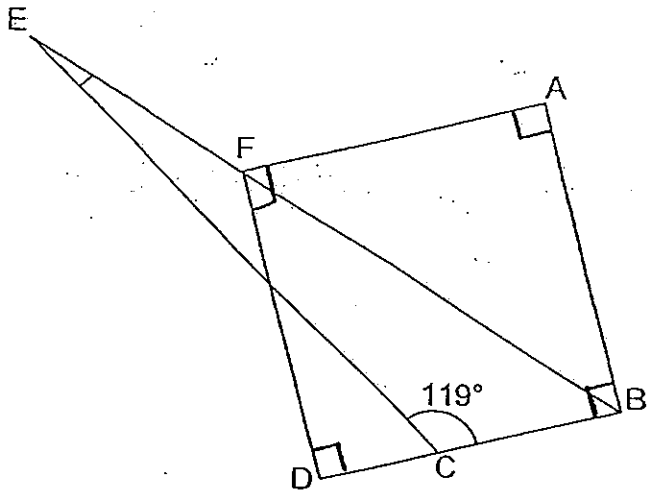
20. In Goodwages Factory, 25 workers were on medical leave in June. In July, 20 workers were on medical leave. What was the percentage decrease in the number of workers who were on medical leave from June to July?

Ans : _____%

21. A piece of string is cut into 3 pieces in the ratio 9 : 5 : 2. The longest piece is 28 cm longer than the shortest piece. Find the length of the original piece of string.

Ans : _____ cm

22. The figure is not drawn to scale. ABDF is a square. EB and EC are straight lines. Find ∠CEB.



Ans : _____ °

23. The table shows the parking fees for a carpark.

First hour	$1.30
Every additional 15 minutes or part thereof	$0.50

Mohan parked his car for $3\frac{5}{12}$ h. How much parking fees did he pay?

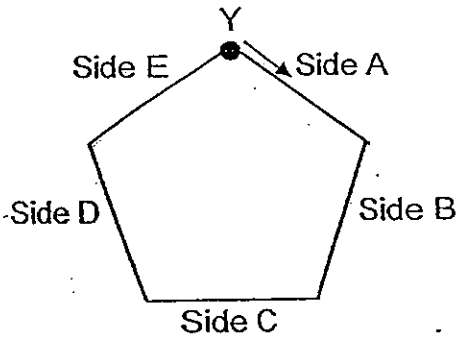
Ans : $ _____

Do not write in this space

24. There were 400 more pupils in Eminent Primary School than in Glorious Primary School. When 26 pupils in Glorious Primary School left the school, both schools had 2004 pupils altogether. How many pupils were there in Glorious Primary School at first?

Ans : _____

25. A snail started crawling along a pentagon of equal sides from the point marked Y in the direction shown. On which side will the snail be when it has crawled $\frac{13}{20}$ of the distance around the pentagon?

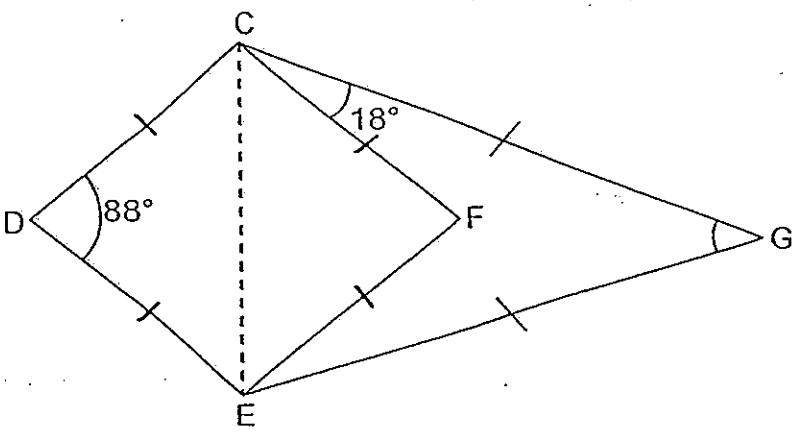


Ans : _____

Questions **26 to 30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. [10 marks]

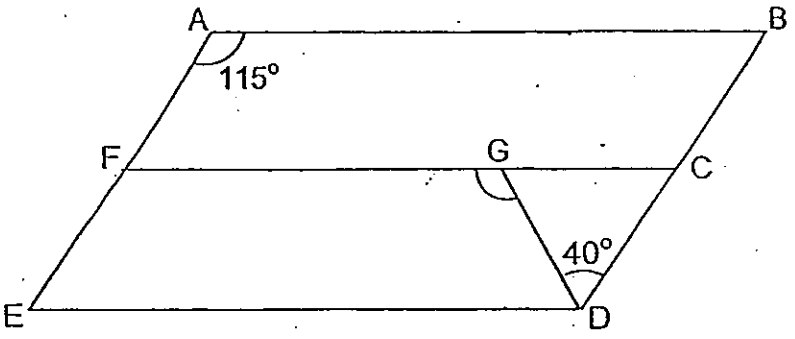
Do not write in this space

26. The figure is not drawn to scale. CDEF is a rhombus and CEG is an isosceles triangle. Find ∠CGE.



Ans : _____ °

27. In the figure, ABDE is a parallelogram. AB//FC and FC//ED. Find ∠FGD.



Ans : _____ °

28. 1 kg of grapes cost as much as 2 kg of apples. Fion spent $36 on 4 kg of grapes and 4 kg of apples. What was the cost of 4 kg of apples?

Do not write in this space

Ans : $_____

29. Dolores needs 17 cans of peaches to prepare for a party. 1 can of peaches costs $2. For every 4 cans of peaches, she will receive 1 can of peaches free. What is the minimum amount of money that Dolores has to pay?

Ans : $ _____

30. The ratio of the number of men to the number of women at a cafe was 2 : 3. After some time, 60 more men came and 30 women left. In the end, there were 20 more women than men at the cafe. Find the number of women at the cafe in the end.

Do not write in this space

Ans : _____

End of Paper 1

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2013 Semestral Assessment One

Paper 2

13 May 2013

Paper 1	40
Paper 2	60
Total	100

_____

Parent's Signature

18 QUESTIONS
60 MARKS

TOTAL TIME FOR PAPER 2: 1 HOUR 40 MINUTES

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of an approved calculator is expected, where appropriate.

This booklet consists of 17 printed pages including the cover page.

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

1. Lucille and Kyrena shared 52 toffees. Kyrena had the larger share. When each of them gave away half of her original share, Kyrena had 12 more toffees than Lucille. How many toffees did Kyrena have at first?

Ans: _____ [2]

2. The average mass of 3 women and 9 men is 73 kg. The average mass of all the men is 68 kg. What is the average mass of all the women?

Ans: _____ kg [2]

3. In a farm, $\frac{3}{10}$ of the animals are goats. $\frac{2}{7}$ of the remaining animals are cows. The rest of the animals are pigs. There are 8 060 more pigs than goats. Find the total number of animals in the farm.

Do not write in this space.

Ans: _____ [2]

4. Gonan wanted to buy 8 notebooks of the same type but found that he was short of $0.90. If he were to buy 5 such notebooks, he would have $3.60 left. How much money did Gonan have?

Ans: $ _____ [2]

5. Aizza had 145 kg of meat. 25% of it was mutton and the rest was chicken. Later, she bought some more mutton. In the end, 80% of the meat that she had was mutton. How much mutton did Aizza buy?

Do not write in this space

Ans: _____ kg [2]

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

Do not write in this space.

6. At a funfair, Maeve received a total amount of \$5334 from selling lollipops at 60¢ each, 45¢ each and \$1.50 each. She sold 340 more lollipops at 60¢ each than at \$1.50 each. Given that she received \$2700 from selling the lollipops at \$1.50 each, how many lollipops did she sell altogether?

Ans: _____ [4]

7. Calix and Brooklyn each had some savings. They wanted to buy a water-bottle of the same cost. Calix was short of $22 and Brooklyn was short of $3. When they combined their savings, they still did not have enough money to buy one water-bottle. What is the greatest possible cost of the water-bottle? (Note : the cost of the water-bottle is a whole number)

Do not write in this space.

Ans: _____ [4]

8. During a sale, the discounted price of a bottle of perfume was $\frac{10}{13}$ of its usual price. Sheridan bought 4 such bottles during the sale and saved a total of $234. What was the usual price of one such bottle of perfume?

Do not write in this space.

Ans: _____ [3]

9. Jotham gave Webster 38% of his car magazines and had 31 car magazines left. As a result, Webster's collection of car magazines increased by 76%. How many car magazines did Webster have before he received from Jotham?

Do not write in this space.

Ans: _____ [3]

10. Mrs Jung saved 28% of her salary in January. In February, her salary was reduced by 20% but she still saved the same amount of $1351.

(a) What was her salary in February?

(b) What percentage of her salary in February did she save?

Ans: (a) _____ [2]

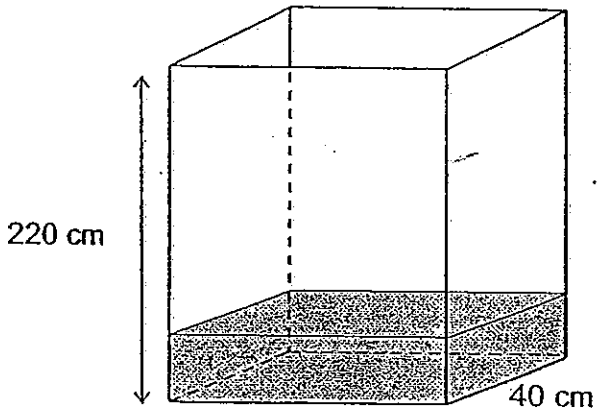
(b) _____ [2]

11. The rectangular tank shown below was 16% filled with water. The water in the tank was poured into another cubical tank of edge 44 cm. The cubical tank was filled up completely.

(a) What is the capacity of the rectangular tank?

(b) What is the length of the rectangular tank?

Do not write in this space



Ans: (a)_____[2]

(b)_____[1]

12. 46% of the books in a library are English books. The rest are Chinese and Malay books. The number of Chinese books is 5 times of the number of Malay books.

(a) Express the number of English books as a fraction of the number of Malay books.

(b) Given that there are 1443 more English books than Malay books, how many more Malay books are to be added to the library so that there are as many Chinese books as Malay books?

Do not write in this space.

Ans: (a)_____ [1]

(b)_____ [3]

13. John and Mark collect marbles. The ratio of the number of marbles John collects to the number of marbles Mark collects is 5 : 7. If John gives Mark 141 marbles, the ratio of the number of John's marbles to the number of Mark's marbles will become 1 : 5. Find the total number of marbles the boys have.

Do not write in this space.

Ans: _____ [3]

14. Two taps, X and Y, were turned on at the same time to fill a tank 109 cm by 50 cm by 100 cm. The tank had a plug which was attached to the bottom. Water from the two taps flowed into the tank at 2.2 ℓ/min and 1.7 ℓ/min respectively. After 14 minutes, the plug was opened, with the two taps still turned on. Given that the water flowed out of the plug at 300 m ℓ/min, what is the water level 3 minutes after the plug was removed?

Do not write in this space.

Ans: _____ [5]

15. A tray of sweets was shared equally among 8 children. 3 children gave up 50% of what they could receive. After that, each of the remaining children received 12 more sweets.

(a) How many sweets did each of the 3 children give up?

(b) How many sweets were there in the tray at first?

Do not write in this space.

Ans: (a)_____ [2]

(b)_____ [1]

16. A box contained some sketch books and diaries. The number of sketch books was twice of the number of diaries. Each time, 3 sketch books and 5 diaries were removed from the box. After some time, only 56 sketch books were left in the box.

(a) How many diaries were removed from the box?

(b) What was the total number of sketch books and diaries in the box originally?

Do not write in this space.

Ans: (a) _____ [4]

(b) _____ [1]

17. A club had adults and children in the ratio 3 : 2. After 10 adults and 80 children joined the club, the ratio of the number of the adults to the number of children became 1 : 2.

(a) How many members were there in the club at first?

(b) How many children were there in the end?

Do not write in this space.

Ans: (a) _____ [2]

(b) _____ [2]

18. Dion, Ellen and Fred shared a sum of money. Dion's share was 50% of Ellen's share and Ellen's share was 75% of Fred's share. Ellen then gave Fred \$950.50 and this was $\frac{1}{5}$ of what Fred had in the end.

(a) Express Fred's original share as a percentage of the total amount of money shared among the 3 friends. Leave your answer correct to 1 decimal place.

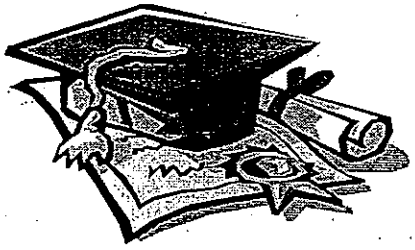
(b) Find the total sum of money that was shared among the 3 friends.

Do not write in this space.

Ans: (a)_____ [1]

(b)_____ [4]

End of Paper 2



ANSWER SHEET

EXAM PAPER 2013
SCHOOL : CHIJ
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
3	1	4	3	2	3	4	2	3	1	2	3	1	4	2

16) $\sqrt{81} = 9$
$9 \times 9 \times 9 = 729cm_3$

17) $84 \div \frac{3}{4} = 84 \times 4/3$
$= 28 \times 4 = 112$

18) $24 \div 4 = 6$
$6 \times 9 = 54$

19) $180° - 62° = 118°$

20) $25 - 20 = 5$
$5/20 \times 100\% = 20\%$

21) $9u - 2u = 7u \rightarrow 28$
$1u \rightarrow 4$
$9u + 2u + 5u = 16u$
$16u \rightarrow 4 \times 16 = 64cm$

22) $90° \div 2 = 45°$
$180° - 119° - 45° = 16°$

23) $5/12h \rightarrow 25min$
1^{st} hour→\$1.30
2^{nd} hour→\$0.50 x (60÷15) = \$2
3^{rd} hour→\$2
25min→\$0.50 x 2 = \$1
\$1+\$2+\$2+\$1.30 = \$6.30

24) $2004 + 26 = 2030$
$2030 - 400 = 1630$
$1630 \div 2 = 815$

25) $20 \div 5 = 4$
$13 \div 4 = 3\frac{1}{4}$
A→B→C→D
side D

26)180° − 88° = 92°
92° ÷2 = 46°
46° + 18° = 64°
180° − 64° − 64° = 52°

27)115° − 40° = 75°
180° − 75° = 105°

28)1G = 2A x4
4G =8A

8u + 4u = 12u
$36÷12 = $3
$3 x 4 = $12

29)5 cans→$2 x 4 = $8
15 cans→$8 x(15÷5) = $24
$24+($2x2) = $28

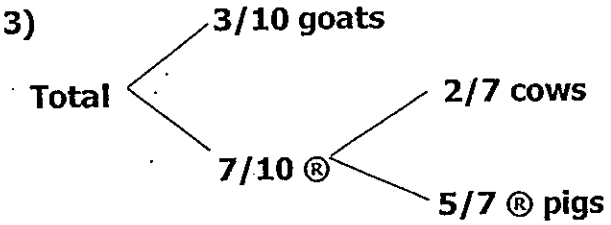
30)2u+60 = 1p
3u − 30 = 1p + 20
3u = 1p + 50
2u = 1p − 60
1u→110
3u→110 x3 = 330
330 − 30 = 300

Paper 2

1)(52 − 12 − 12) ÷4 = 7
(7 x 2)+ 12 + 12 = 38
Kyrena had 38 toffees at first.

2)73 x (9+3) = 876
68 x 9 = 612
(876 − 612) ÷3 = 88
The average mass of all the women is 88kg.

3)



5/7 x 7/10 = 5/10
5/10 − 3/10 = 2/10→8060
(8060÷2)x 10 = 40300
The total number of animals is 40300

4)8N – $0.90 = 5N + $3.60
3N→$4.50
1N→$1.50
($1.50 x 5)+ $3.60 = $11.10
Gonan had $11.10

5)¼ x 145 = 36.25 (M)
145 – 36.25 = 108.75 ©
(108.75 x 4) – 36.25 = 398.75
Aizza bought 398.75kg of Mutton.

6)2700÷1.5 = 1800 ($1.50)
1800 + 340 = 2140 (60c)
$2700 + (2140 x $0.60) = $3984
$5334 – $3984 = $1350
$1350÷$0.45 = 3000 ($0.45)
1800 + 2140 + 3000 = 6940
She sold 6940 lollipops altogether.

7)

cost of water bottle	check	√ / X
$23	($23 – $22)+($23 – $3) = $21	√
$24	($24 – $22)+($24 – $3) = $23	√ √
$25	($25 – $22)+($25 – $3) = $25	X

The greatest possible cost of the water bottle is $24

8)10u x 4 = 40u
13u x 4 = 52u
52u – 40u = 12u→234
1u→19.5
13u→253.5
The usual price of one such bottle of perfume is $253.50

9)50u – 19u = 31u→31
1u→1
19u→19
76% →19
100% →19/76 x 100 = 25
Webster had 25 car magazines before he received from Jotham.

10)a)($1351÷28)x 80 = $3860
Her salary in February was $3860

b)($1351÷$3860)x 100% = 35%
She saved 35% of her salary in February

11)a)44 x 44 x 44 = 85184
(85184÷16) x 100 = 532400
The capacity of the rectangular tank was 532400cm^3

b)532400÷(220 x 40) = 60.5
The length of the rectangular tank was 60.5cm

12)a)23u→Eng
50u – 23u = 27u→Chinese + Malay
27u÷6 = 4.5u
Eng/Malay = 23/4.5
= 46/9
The fraction is 46/9

b)46u – 9u = 37u→1443
1u→39
46u→39 x 46 = 1794 (Eng)
9u→39 x 9 = 351 (Malay)
351 x 5 = 1755 (Chinese)
1755 – 351 = 1404
1404 Malay books are to be added to the library.

13)5u – 2u = 3u→141
1u→47
12u→564
The total number of marbles the boys have is 564

14)109 x 50 x 100 = 545000
(2.2L + 1.7L) x 14 = 54.6L
(2.2L + 1.7L)x 3 = 11.7L
300ml→0.3L
11.7L – (0.3L x 3) = 10.8L
54.6L + 10.8L = 65.4L
65.4L→65400cm^2
65400÷109÷50 = 12
The water level is 12cm 3min after the plug was removed.

15)a)8 – 3 = 5
5 x 12 = 60
60÷3 = 20
Each of the 3 children gave up 20 sweets.

b)20 x 2 = 40
40 x 8 = 320
There were 320 sweets in the tray at first.

16)a)$5X = 3X + 56/2 \times 2$

$10X = 3X + 56$

$7X \rightarrow 56$

$X = 8$

$8 \times 5 = 40$

40 diaries were removed from the box.

b)$8 \times 3 = 24$

$24 + 56 = 80$

$80 + (80 \div 2) = 120$

The total number of sketch books and diaries in the box original is 120.

17)a)A : C

3 : 2

+10 +80

1P : 2P

A : C

6 : 2

+20 +80

2P : 2P

$6u + 20 = 2u + 80$

$4u \rightarrow 60$

$1u \rightarrow 15$

$3u + 2u = 5u$

$15 \times 5 = 75$

There were 75 members at first.

b)$(15 \times 2) + 80 = 110$

There are 110 children in the end.

18)D : E E : F

1 : 2 x3 3 : 4 x2

3 : 6 6 : 8

D : E : F : T

3 : 6 : 8 : 17

a)$(3802 \div 8079.25) \times 100\% \approx 47.1\%$

Fred's original share was 47.1% of the total amount of money shared among the 3 friends.

b)$\$950.50 \times 5 = \$4752.50$ (F in the end)

$(\$4752.50 - \$950.50) \div 8 = \$475.25$

$\$475.25 \times 8 = \$3802$

$\$475.25 \times 17 = \$8079.25$

The total sum was $8079.25.