NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2014

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	**/ 20**
Booklet B	**/ 20**

Paper 1 Total: / 40

Name: _____ ( )

Class: Primary 6 ( )

Date: 20 August 2014

Parent's Signature:_____

Any query on marks awarded should be raised by **3 September 2014.** We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR.

PAPER 1 (BOOKLET A)

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 oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

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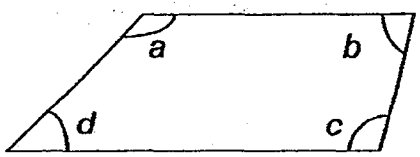
1 The figure below shows a trapezium.



Which one of the following options is correct?

(1) $\angle a = \angle c$

(2) $\angle a = \angle b$

(3) $\angle a + \angle b = \angle c + \angle d$

(4) $\angle a + \angle d = \angle c + \angle b$

2 Shirley had 395 stamps. Her father gave her some stamps and she had 510 stamps in the end. How many stamps did her father give her?

(1) 115

(2) 225

(3) 805

(4) 905

3 Arrange the following numbers in ascending order.

3241 , 2413 , 3421 , 2431

(1) 2413, 2431, 3241, 3421

(2) 2413, 2431, 3421, 3241

(3) 3421, 3241, 2413, 2431

(4) 3421, 3241, 2431, 2413

4 Round off 4.746 to 2 decimal places.

(1) 4.70

(2) 4.74

(3) 4.75

(4) 4.80

5 How many common factors are there between 12 and 18?

(1) 1

(2) 2

(3) 3

(4) 4

6 A tank, 50 cm by 20 cm by 20 cm, was completely filled with water. Find the volume of the water in the tank.

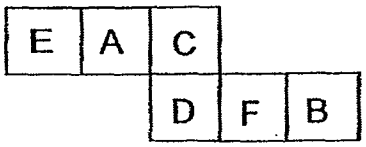
(1) 20 cm^3

(2) 200 cm^3

(3) 2000 cm^3

(4) 20 000 cm^3

7 The figure below shows the net of a cube.



Which face is opposite to face D when the net is folded to form a cube?

(1) A

(2) B

(3) E

(4) F

8 A group of children attended a party. The ratio of the number of boys to the number of girls was 5 : 3. What fraction of the total number of children were girls?

(1) $\frac{5}{8}$

(2) $\frac{3}{8}$

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

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

9 Find the value of \$1008.72 ÷ 9.

(1) \$12.08

(2) \$12.80

(3) \$112.08

(4) \$112.80

10 What is 25% of $360?

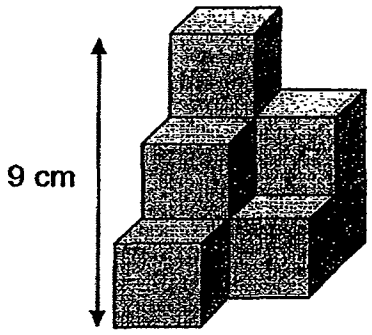
(1) $90

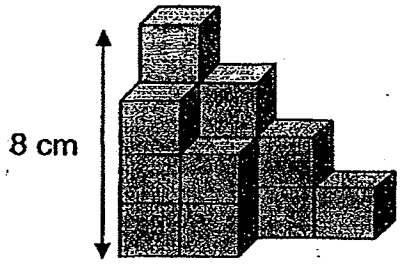
(2) $120

(3) $270

(4) $335

11 The solids shown below are formed by cubes of different dimensions. Find the difference in volume between the two solids.





(1) 9 cm^3

(2) 96 cm^3

(3) 123 cm^3

(4) 131 cm^3

12 Simplify $11p + 3p \times 2 + 5$.

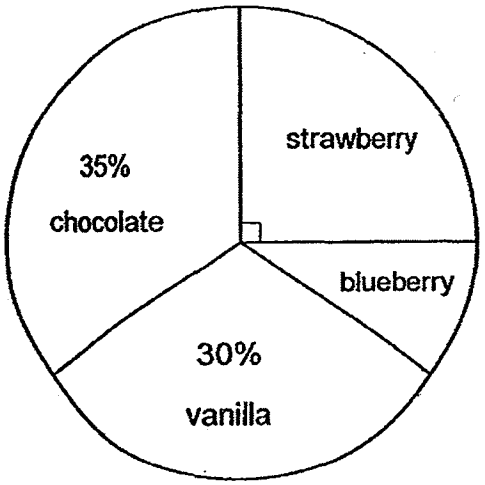
(1) $32p$

(2) $98p$

(3) $17p + 5$

(4) $28p + 5$

13 The pie chart below shows the types of cupcakes sold by a bakery.



A total of 165 vanilla and strawberry cupcakes were sold. How many blueberry cupcakes were sold?

(1) 30

(2) 55

(3) 66

(4) 300

14 It takes 5 minutes to fill an empty cubical tank measuring 2 m by 2 m by 2 m completely with Tap Z. How long does it take Tap Z, flowing at the same rate, to fill an empty tank measuring 4 m by 6 m by 8 m completely with water?

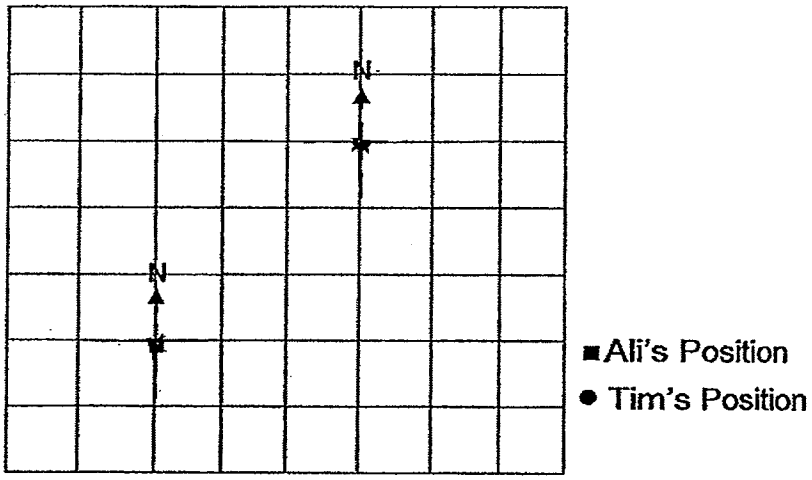
(1) 24 minutes

(2) 120 minutes

(3) 192 minutes

(4) 960 minutes

15 Ali and Tim were standing in a school field as shown in the grid below. Ali was facing south-east and Tim was facing north. How many degrees clockwise must Ali and Tim both turn in order to face each other?



(1) Ali → 90°, Tim → 45°

(2) Ali → 90°, Tim → 225°

(3) Ali → 270°, Tim → 45°

(4) Ali → 270°, Tim → 225°

Name: _____( ) Class: Pr 6 ( )

P6 Prelim 2014

PAPER 1 (BOOKLET B)

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)

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16 Express 17 kg and 50 grams in kg.

Ans_____ kg

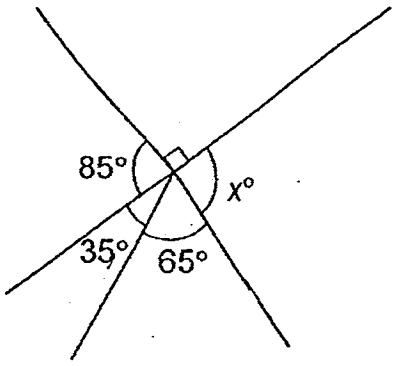
---

17 Find the value of $1\frac{2}{3} + 2\frac{3}{4}$.

Ans: _____

---

18 In the figure below, find $\angle x$.



Ans: _____ °

---

19 Meiqi jogged 1.5 km in 10 minutes. Express her jogging speed in m/s.

Ans: _____ m/s

---

20 Raj and Pradeep shared a bag of candies in the ratio 2 : 5. There were 70 candies in the bag. How many candies did Raj receive?

Ans: _____

---

21 Find the value of 498×67.

Ans: _____

---

22 Kumar started doing his homework at 2.55 p.m. and finished only at 4.15 p.m. How long did he spend doing his homework?

Ans: _____ h _____ min

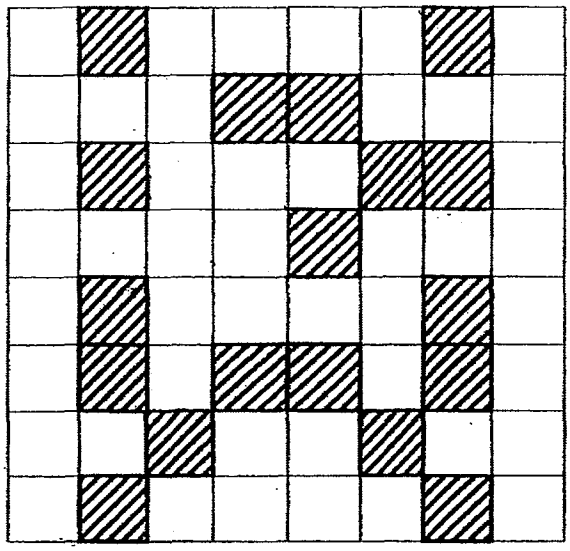
---

23 Which digit in 231.405 is in the hundredths place?

Ans: _____

---

24 The figure below is made up of squares. Shade **two** more squares so that the figure has a line of symmetry.



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25 Find the product of $3\frac{7}{8} \times 6$. Give your answer in the simplest form.

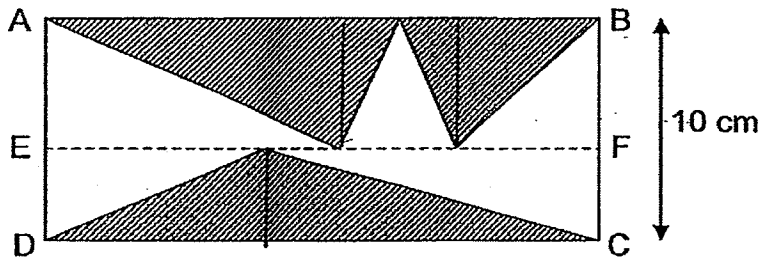
Ans: _____

Questions **26** to **30** 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)

---

26 The figure below shows rectangle ABCD and 3 shaded triangles. The total area of the shaded parts is 300 cm^2. Given that AB // EF // DC and BC is 10 cm, find AB.



Ans: _____ cm

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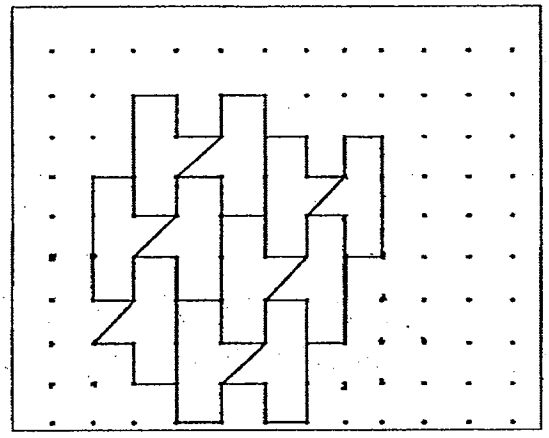
27 The pattern in the box below shows part of a tessellation.



(a) Shade the unit shape in the above tessellation.

(b) Extend the tessellation by drawing **two** more unit shapes completely in the space provided in the box.

---

28 Yiling was m years old 2 years ago. Her brother is 3 years older than her. Find, in terms of m, the sum of their ages now.

Ans: _____

---

29 The table below shows Weiwei's marks for 4 subjects. Part of the table is covered with ink. She scored 10 more marks in Mathematics than in Science. How many marks did she score in Mathematics?

Subject	Marks
English	76
Mathematics	
Science	
Chinese	84
Total	310

Ans: _____

---

30 The capacity of Cylinder A is $\frac{2}{3}$ the capacity of Cylinder B. Both cylinders are filled to the brim with a mixture of water and oil. $\frac{1}{2}$ of the mixture in Cylinder A is oil and $\frac{5}{6}$ of the mixture in Cylinder B is oil. What fraction of the total mixture in Cylinder A and Cylinder B is oil?

Ans: _____

END OF PAPER

NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2014

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	**/ 60**
GRAND TOTAL	**/ 100**

Name: _____ ( )

Class: Primary 6 ( )

Date: 20 August 2014

Parent's Signature:_____

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PAPER 2

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)

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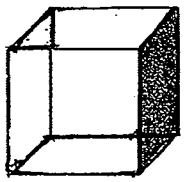
1 The figure below shows a cube. The total length of all the edges of the cube is 156 cm. Find the area of the shaded face.



Ans: _____ cm^2

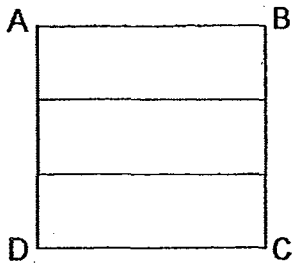
---

2 Jerome had 40 marbles. He bought another 10 marbles. What is the percentage increase in the number of marbles?

Ans: _____ %

---

3 Square ABCD shown below is made up of 3 identical rectangles and has an area of 81 cm^2.



The figure below is formed using the 3 identical rectangles. What is the perimeter of Figure 2?

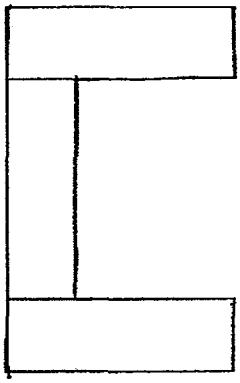


Figure 2

Ans: _____ cm

4 The average mass of 6 pupils was 40 kg. The average mass of the first 4 pupils was 12 kg more than the average mass of the remaining 2 pupils. Find the average mass of the remaining 2 pupils.

Ans: _____ kg

---

5 There was a total of 138 adults standing in a queue for parade tickets. There were 5 men standing between every 2 women. What was the least possible number of women in the queue?

Ans: _____

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)

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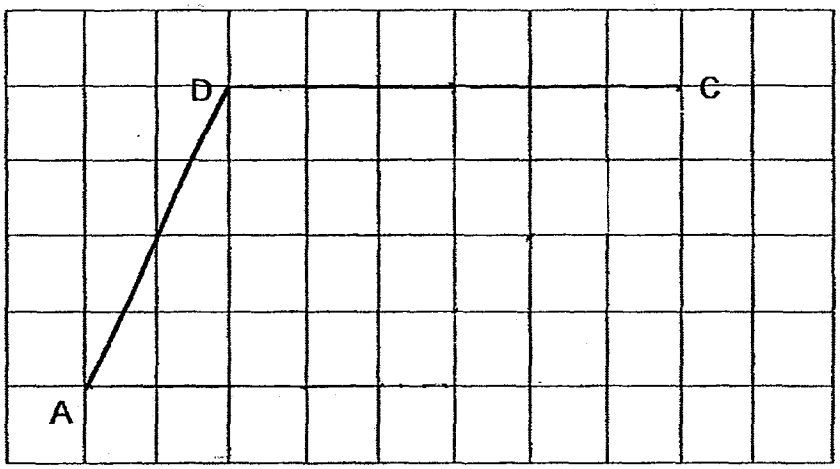
6 In the figure below, AD and CD form two sides of a trapezium ABCD. Given that $\angle BCD = 45°$, complete the drawing of trapezium ABCD. Label your drawing.



[3]

---

7 Kim and Kathy received some money. Kim had 55% of the amount of money they received. After spending 40% of her share, Kathy had $54 left. How much did Kim receive?

Ans _____ [3]

---

8 There were 42 people at a party. 8 of them were men and 15 of them were women. The number of women was thrice the number of girls and the remaining were boys. How many males were there at the party?

Ans: _____ [3]

---

9 A van and a car started travelling from Town X to Town Y at the same time. After 5 hours, the car reached Town Y while the van covered only $\frac{7}{10}$ of the journey. The speed of the van was 21 km/h less than the speed of the car. Find the speed of the van.

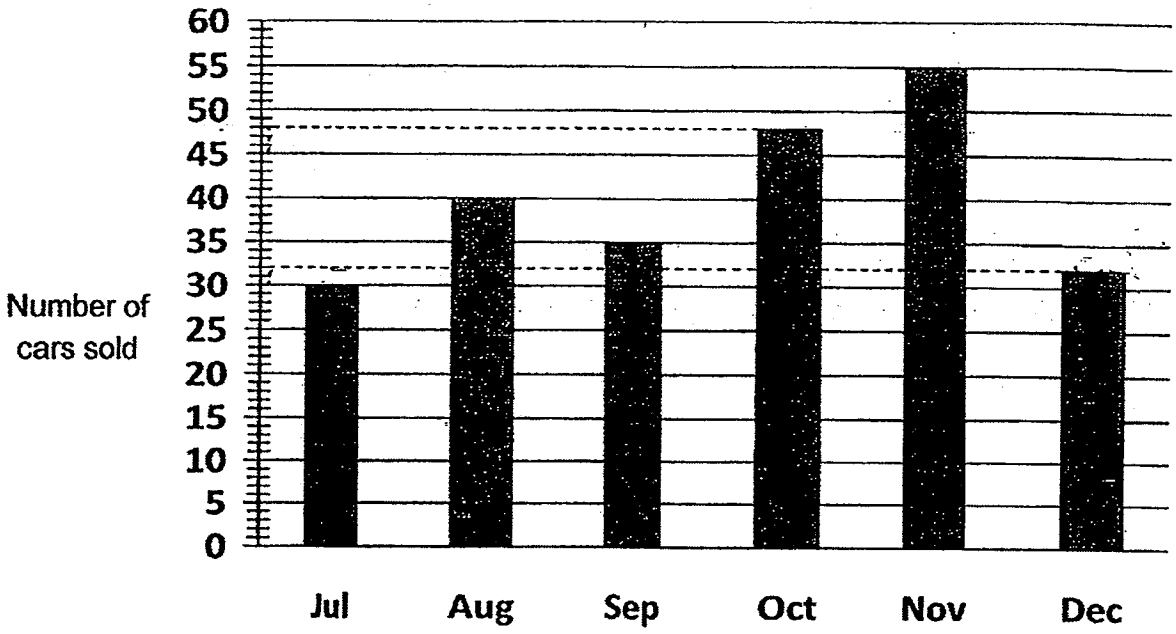
Ans: _____ [3]

---

10 At a party, there were twice as many boys as adults, thrice as many adults as girls. Every boy was given 12 sweets, every girl was given 26 sweets and the adults were not given any. A total of 2254 sweets were given out altogether. How many adults were there at the party?

Ans: _____ [3]

11 The graph below shows the number of cars sold from July to December.



(a) Find the percentage decrease in sales from November to December, correct your answer to 1 decimal place.

(b) In which month(s) was the number of cars sold more than the average number of cars sold from July to December?

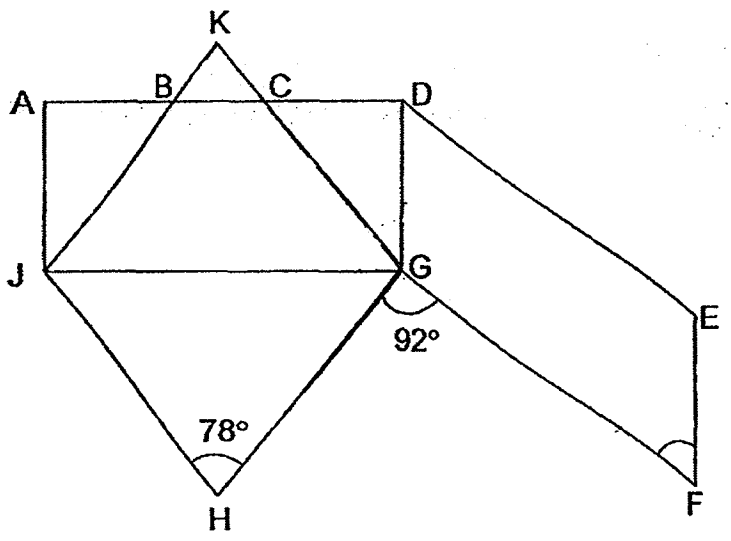
Ans: (a)_____ [2]

(b)_____ [2]

12 In the figure shown below, ADGJ is a rectangle, GHJK is a rhombus and DEFG is a parallelogram. $\angle GHJ = 78°$ and $\angle FGH = 92°$.

(a) Find $\angle CGD$.

(b) Find $\angle GFE$.



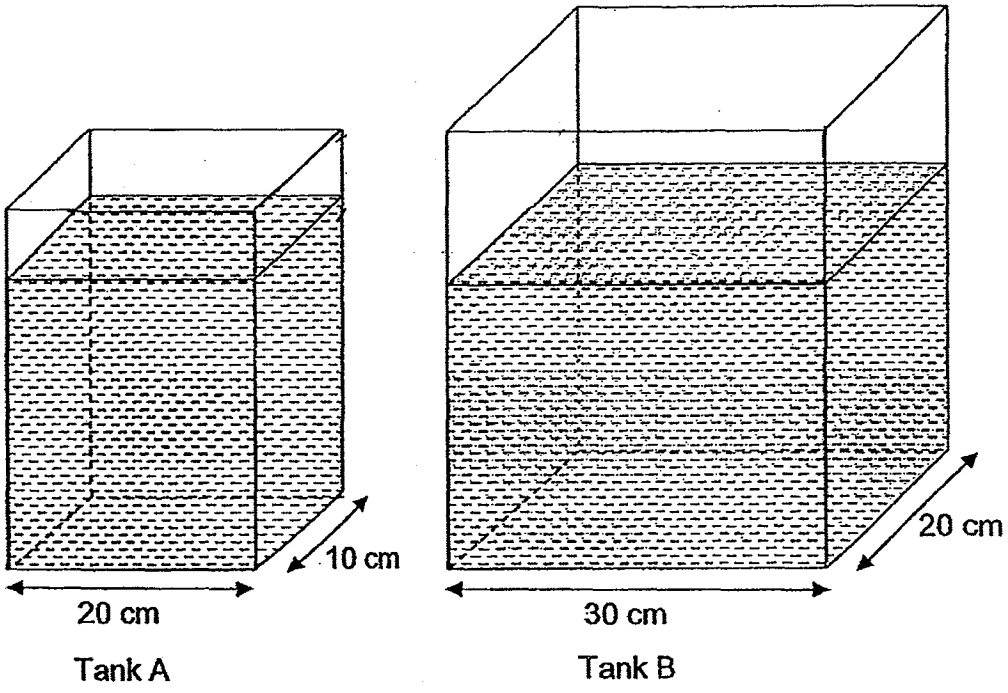
Ans: (a) _____ [2]

(b) _____ [2]

13 Yusof had \$576 more than Suhailah at first. After Yusof spent $\frac{7}{10}$ of his money and Suhailah spent $\frac{13}{20}$ of her money, Yusof had \$37.40 more than Suhailah. How much did Suhailah have at first?

Ans: _____ [4]

14 Mei Mei poured some water into Tank A and Tank B until the water levels in both tanks were the same. She then realised that the total amount of water in both tanks was 19 200 ml.



She then poured another 1200 ml of water into Tank A to fill it up completely. What was the height of Tank A?

Ans: _____ [4]

15 Study the following pattern.

	Column A	Column B	Column C	Column D	Column E	Column F	Column G
Row 1		1		2		3	
Row 2	7		6		5		4
Row 3		8		9		10	
Row 4	14		13		12		11
Row 5		15		16		17	
Row 6	...		...		...		...
:		:		:		:	

(a) In which column will the number 80 appear?

(b) What number will appear in Row 99 Column D?

Ans: (a) _____ [2]

(b) _____ [2]

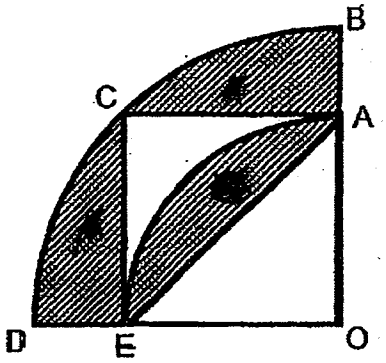
16 Printer A prints at a rate of 105 pieces of paper in every 3 minutes and Printer B prints at a rate of 136 pieces of paper in every 4 minutes. At 2 p.m., both printers started printing. After a while, Printer A stopped printing for some time as the ink cartridges were being changed before it continued to print again. Printer B continued printing during this time. At 4 p.m., the total number of pieces of paper printed during the past two hours was 7930. Express the number of pieces of paper printed by Printer A as a percentage of the total number of pieces of paper printed by both printers. Round off your answer to 2 decimal places.

Ans: _____ [5]

17 The ratio of the number of twenty-cent coins to the number of fifty-cent coins in a box was 5 : 3. 60 twenty-cent coins were taken out and exchanged for fifty-cent coins of equal value. The money was then put back into the box. The ratio of the number of twenty-cent coins to the number of fifty-cent coins became 1 : 3. How much money was there in the box?

Ans: _____ [5]

18 The figure below is made up of a big quadrant OBD, a small quadrant OAE and a square ACEO. The radius of the big quadrant OBD is 12 cm. The area of the big quadrant OBD is twice the area of the small quadrant OAE. Using the calculator value of π, find the area of the shaded parts, correct to 2 decimal places.



Ans: _____ [5]

END OF PAPER

Answer Ke

EXAM PAPER 2014
SCHOOL : NANYANG
PRIMARY : P6
SUBJECT : MATHEMATICS
TERM : SA2

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

16)17.05 kg **17)$4\frac{5}{12}$** **18)85°** **19)2.5 m/s** **20)20**

21)33366 **22)1 h 20 min** **23)0** **24)**

25)$23\frac{1}{4}$ **26)60 cm**

27) **28)(2m+7) years old**

29)80 **30)7/10**

Paper 2

1)12 edges→156 cm
1 edges→ 13 cm
Shaded face→13 cm x 13 cm = 169 cm^2

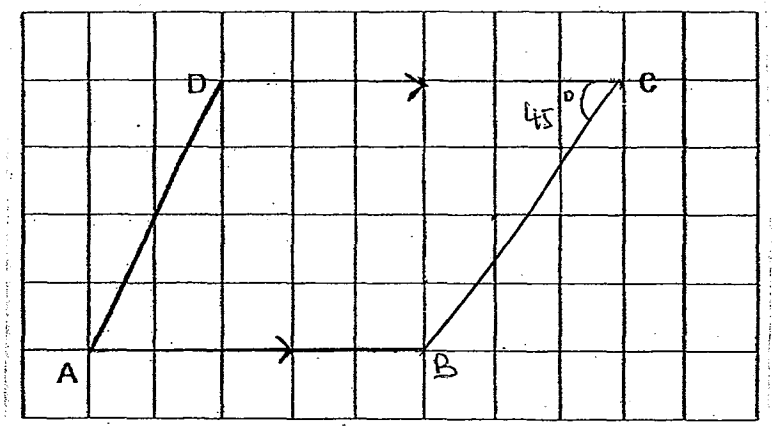
2)$\frac{10}{40} = \frac{1}{4}$
$\frac{1}{4} \times 100\% = 25\%$

3)9 x 2 = 18
15 x 2 = 30
6 x 2 = 12
18+30+12 = 60 cm

4)40 x 6 = 240
12 x 4 = 48
240 – 48 = 192
192 ÷ 6 = 32 kg

5)138 ÷ 6 = 23

6)



7)Kathy→100% - 55% = 45%
$\frac{60}{100} \times 45\% = 27\%$
27% →$54
55% →$\frac{55}{27} \times \$54 = \$110$

8)G→15÷3 = 5
Females→15 + 5 = 20
Males→42 – 20 = 22

9)3/10 journey→21 km/h x 5 = 105 km
1/10 journey→35 km
7/10 journey→245 km
Speed of van→245 km/ 5h→49km/h

10)(12 x 6) + 26 = 98
2254÷98 = 23
23 x 3 = 69

11)a)41.8%
b)October and November

12)∠CGJ→(180 – 78) ÷2 = 51
∠CGD→90 – 51 = 39
∠DGF→360 – 92 – 51 – 51 – 39 = 127
∠GFE→180 – 127 = 53
∠CGD is 39°
∠GFE is 53°

13)6u + 172.80 = 7u + 37.40
1u→135.40
135.40 x 20 = $2708

14)1200÷20÷10 = 6
19200÷(20x10)+(30x20) = 24
24 + 6 = 30 cm

15)a)column F
b)99 – 1 = 98
98÷2 = 49
49 x 7 = 343
343 +2 = 345

16)2 hours→120 min
120÷4 = 30
30 x 136 = 4080
7930 – 4080 = 3850
$\frac{3850}{7930} \times 100\% = \frac{3850}{793}$
≈48.55%

17)5u – 60 = 1p
15u – 180 = 3p
3u + 24 = 3p
12u→204
1u→17
(17 x 5 x 20c) + (3 x 17 x 50c)
= $17 + $25.50
= $42.50

18)12 x 12 x ¼ x Π = 36Π
2A→36Π ÷ 2 = 18Π
B→(18Π - 36)
(36Π - 72) + (18Π - 36) ≈ 61.65 cm^2