ROSYTH SCHOOL
2018 SEMESTRAL ASSESSMENT
MATHEMATICS
PAPER 1
PRIMARY 6

Name: _____ Register No. _____

Class: Pr 6 -_____

Date: 8 May 2018 Parent's Signature: _____

Total Time for Booklets A and B : 1 hour

Booklet A

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Shade your answers in the Optical Answer Sheet (OAS) provided.
4. You are **not** allowed to use a calculator.
5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 **(Booklet A)**	20	

* This booklet consists of **8** pages (including this cover page)

(Go on to the next page)

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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.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(20 marks)

---

1. Round off 50.242 to the nearest hundredth.

   (1) 50
   (2) 50.2
   (3) 50.24
   (4) 50.25

2. Find the sum of the common factors of 8 and 12.

   (1) 6
   (2) 7
   (3) 14
   (4) 43

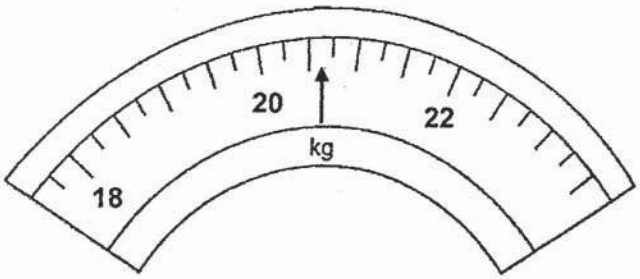
3. There are 60 members in a choir. 28 of them are boys. What is the ratio of the number of girls to the number of boys?

   (1) 7 : 8
   (2) 7 : 15
   (3) 8 : 7
   (4) 8 : 15

(Go on to the next page)

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4. Which one of the following readings is closest to the one shown on the weighing scale below?



(1) 20.2 kg

(2) 20.4 kg

(3) 20.6 kg

(4) 21.2 kg

5. Erwin drove for 150 minutes to reach his work place at 2.30 p.m. At what time did he start driving?

(1) 12.00 a.m.

(2) 12.00 p.m.

(3) 5.00 p.m.

(4) 8.00 p.m.

6. Harry had \$5x. His father gave him \$3x. He bought a storybook for \$14. How much money had he left?

(1) \$8x

(2) \$(2x – 14)

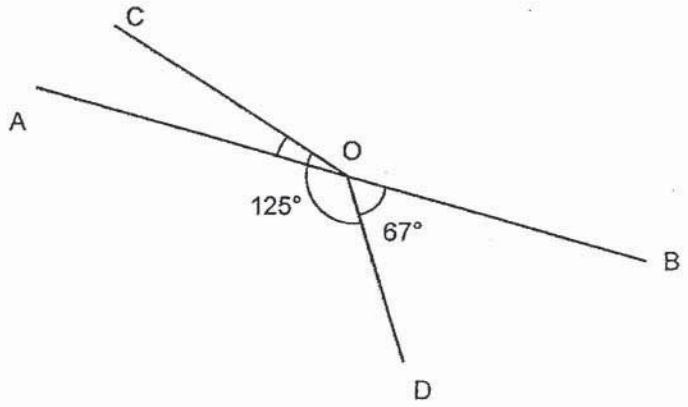
(3) \$(14 – 8x)

(4) \$(8x – 14)

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7. In the figure below, AB is a straight line. ∠ BOD = 67° and ∠ COD = 125°. Find ∠ AOC.



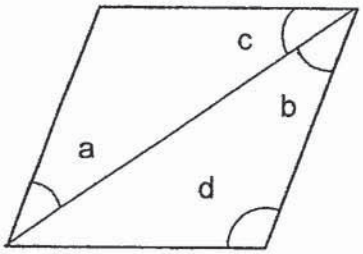
(1) 12°

(2) 23°

(3) 55°

(4) 67°

8. Which statement about the rhombus is **not** true?



(1) ∠ a = ∠ b

(2) ∠ b = ∠ c

(3) ∠ a + ∠ b + ∠ d = 180°

(4) ∠ a + ∠ b + ∠ c + ∠ d = 180°

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9. The table below shows the English test score obtained by a pupil.

English	Score
Test 1	20
Test 2	25

Find the percentage increase in his score.

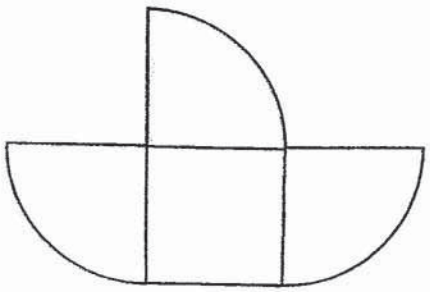
(1) 10%

(2) 20%

(3) 25%

(4) 80%

10. The figure below is not drawn to scale. It is made up of a square and 3 identical quadrants with radius 8 cm. Find the perimeter of the figure in terms of π.



(1) (6π) cm

(2) $(6\pi + 32)$ cm

(3) (12π) cm

(4) $(12\pi + 32)$ cm

(Go on to the next page)

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11. Wati spends $\frac{3}{5}$ of her monthly allowance on food. She spends $\frac{1}{5}$ of the remainder on transport and saves the rest. What fraction of her monthly allowance does she save?

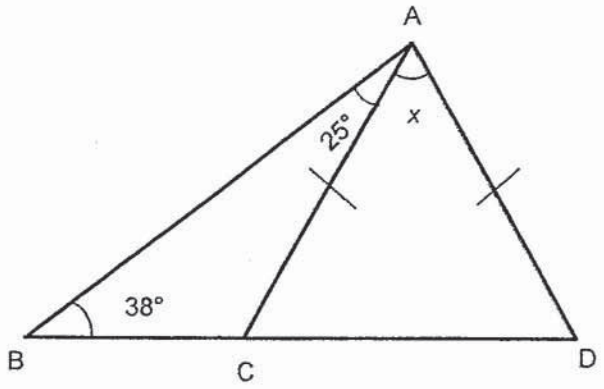
(1) $\frac{2}{5}$

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

(3) $\frac{8}{25}$

(4) $\frac{17}{25}$

12. In the figure, ACD is an isosceles triangle and BCD is a straight line. Find $\angle x$.



(1) 54°

(2) 63

(3) 117°

(4) 126°

(Go on to the next page)

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13. 80 letters are arranged in the sequence as shown below:

W O L V E R I N E W O L V E R I N E W O L .....

How many times does the letter 'E' appear?

(1) 16

(2) 17

(3) 24

(4) 4

14. Chee Kit has 3 strings of different lengths. The total length of the 3 strings measured 50 cm. When he doubled the length of the first string, halved the second string and increased the third string by 6 cm, the 3 strings became equal in length. What was the length of the third string at first?

(1) 8 cm

(2) 10 cm

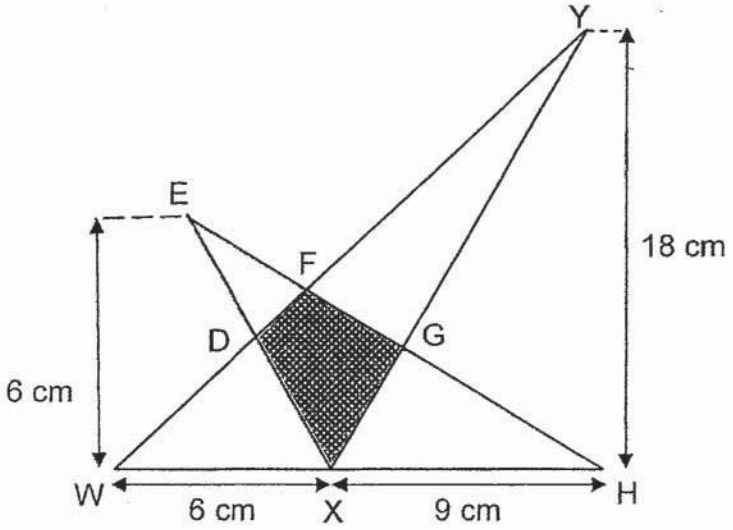
(3) 14 cm

(4) 32 cm

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15. The figure below, not drawn to scale, is made up of triangles WXY and EHX. The unshaded area is 70 cm^2. Find the shaded area DFGX.



(1) 5.5 cm^2

(2) 11 cm^2

(3) 27 cm^2

(4) 81 cm^2

(Go on to Booklet B).

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ROSYTH SCHOOL
2018 SEMESTRAL ASSESSMENT
MATHEMATICS
PAPER 1
PRIMARY 6

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 8 May 2018 Parent's Signature: _____

Total Time for Booklets A and B : 1 hour

Booklet B

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. You are **not** allowed to use a calculator.
4. Write your answers in the booklet.
5. Answer all questions.

Section	Maximum Mark	Marks Obtained
Paper 1 **(Booklet B)**	25	

* This booklet consists of **8** pages (including this cover page).

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Questions **16** to **20** carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

All diagrams in this paper are not drawn to scale unless stated otherwise.

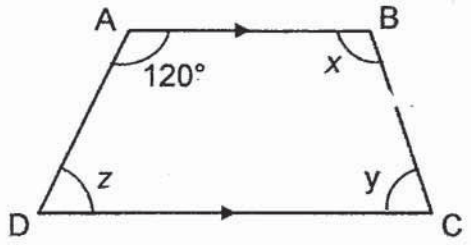
(5 marks)

Do not write in this space

16. Find the value of $48 + 96 \div 4 - 2 \times 16$.

Ans: _____

17. In the figure below, AB is parallel to CD.
Find the value of $\angle x + \angle y + \angle z$.



Ans: _____ °

18. The ratio of the number of boys to the number of girls to the number of adults at a carnival is 2 : 3 : 5. What percentage of the children are girls?

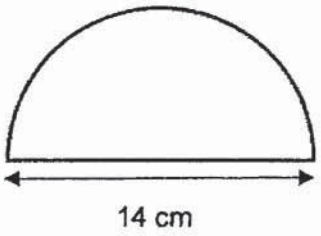
Ans: _____ %

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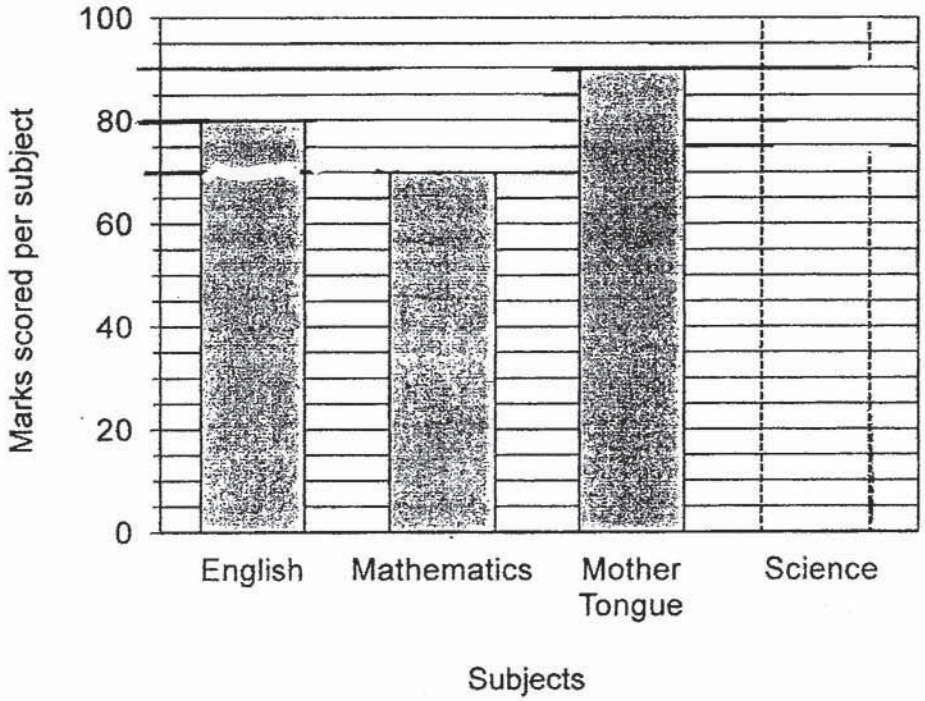
19. Find the perimeter of the semicircle. Take $\pi = \frac{22}{7}$.

Do not write in this space



Ans: _____ cm

20. The graph shows the marks Jane scored for each subject. The mark scored for Science is equal to the average marks she scored for the other three subjects. Draw the bar for Science in the graph.



(Go on to the next page)

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Questions **21** to **30** carry 2 marks each. Show your workings 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.

All diagrams in this paper are not drawn to scale unless stated otherwise.

(20 marks)

Do not write in this space

21. The average mass of 4 parcels is 1.6 kg. After two parcels with masses 1.3 kg and 1.04 kg are removed, what is the average mass of the remaining parcels?

Ans: _____ kg

22. At Rosania Café, Puay Hoon paid $12 for 2 cups of coffee and 1 cup of tea. The cost of each cup of tea was $\frac{2}{3}$ the cost of each cup of coffee. How much did each cup of coffee cost?

Ans: $_____

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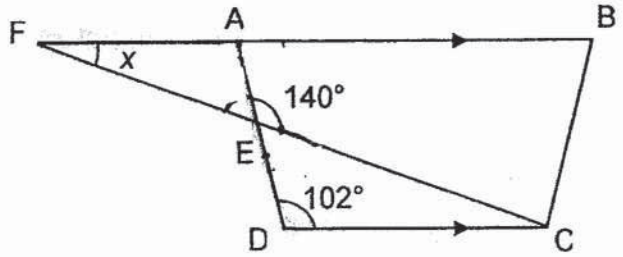
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23. Hidayat has 8 m of string. He cuts the string into pieces, each measuring $\frac{3}{4}$ m long and has some string left. Find the length of the remaining string left.

Do not write in this space

Ans: _____ m

24. ABCD is a trapezium and FB // CD. Find $\angle x$.



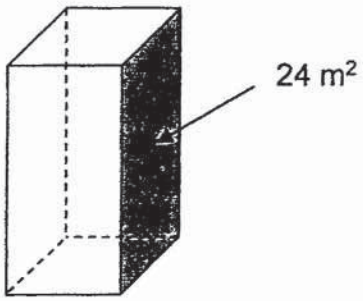
Ans: _____ °

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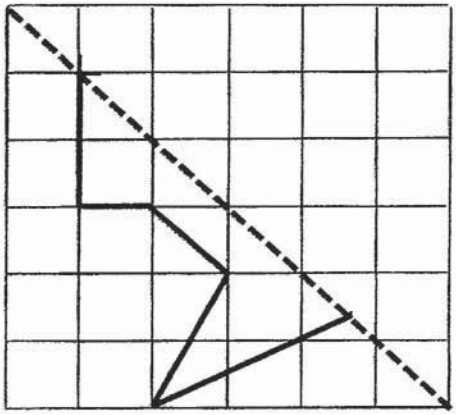
25. The figure shows a cuboid with a square base of area 16 m^2. The area of the shaded face is 24 m^2. What is the height of the cuboid?

Do not write in this space



Ans: _____ m

26. Complete the symmetric figure with the dotted line as the line of symmetry.



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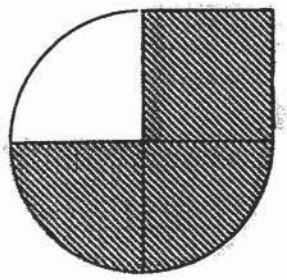
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27. At present, Isabella is 9 years old and her mother is 43 years old. In how many years' time will Isabella's mother be 3 times as old as her?

Do not write in this space

Ans: _____

28. The figure below shows three quadrants with radius 4 cm and a square. Find the perimeter of the shaded region. Leave your answer in terms of π.



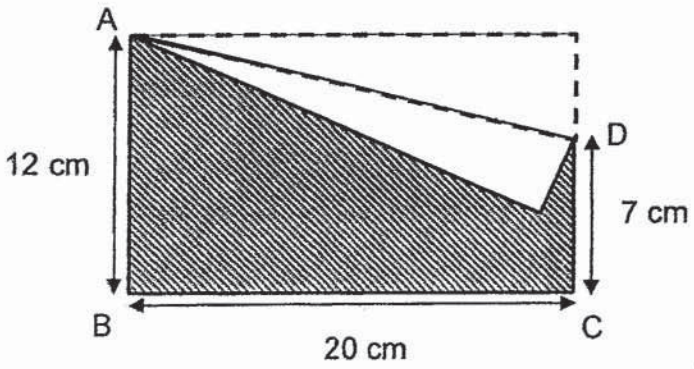
Ans: _____ cm

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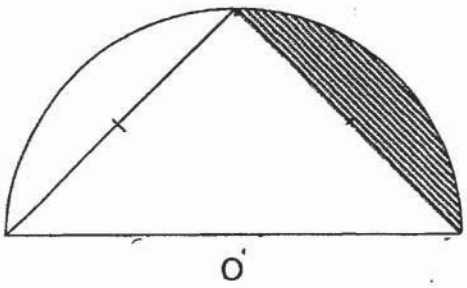
29. A rectangular piece of paper was folded to form the trapezium ABCD below. Find the unshaded area of the trapezium.

Do not write in this space



Ans: _____ cm^2

30. The figure shows an isosceles triangle within a semicircle. O is the centre of of the semicircle and the diameter of the semicircle is 12 cm. Find the area of the shaded part. Leave your answer in terms of π.



Ans: _____ cm^2

End of paper
Have you checked your work?

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ROSYTH SCHOOL
2018 SEMESTRAL ASSESSMENT
MATHEMATICS
PAPER 2
PRIMARY 6

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 8 May 2018 Parent's Signature: _____

Time: 1 h 30 min

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. **Show your workings clearly** as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator.
6. Answer all questions.

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 17	45	

Section	Maximum Mark	Marks Obtained
Paper 1	45	
Paper 2	55	
Total	100	

*** This booklet consists of 16 pages (including this cover page).**

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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)

All diagrams in this paper are not drawn to scale unless stated otherwise.

Do not write in this space

1. Ahmad spent 30% of his money on a pencil and the remainder of his money on a file. He spent $1.60 more on the file than on the pencil. How much money did he have at first?

Ans: $_____

2. There were 18 trays of egg tarts. Each tray contained *b* egg tarts. 2 trays of egg tarts were sold. The remaining egg tarts were shared equally among 4 children. How many egg tarts did each child receive?
Express your answer in terms of *b*.

Ans: _____

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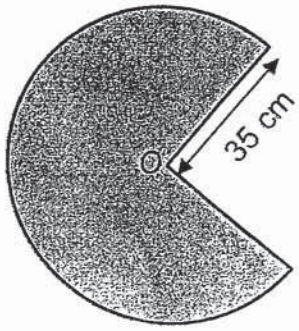
3. Eleanor scored an average of 80 marks for her 3 revision papers. The full marks for each paper was 100 marks.

Each statement below is either true, false or not possible to tell. For each statement, put a tick (✓) in the correct column.

Statement	True	False	Not possible to tell
(i) The score of one test is lower than 80.			
(ii) Eleanor scored 65 and 74 for two of her tests.			

Do not write in this space

4. The figure shows a three-quarter circle with centre O and radius 35 cm.
Using the calculator value of π, find the area of the figure.
Give your answer correct to 2 decimal places.

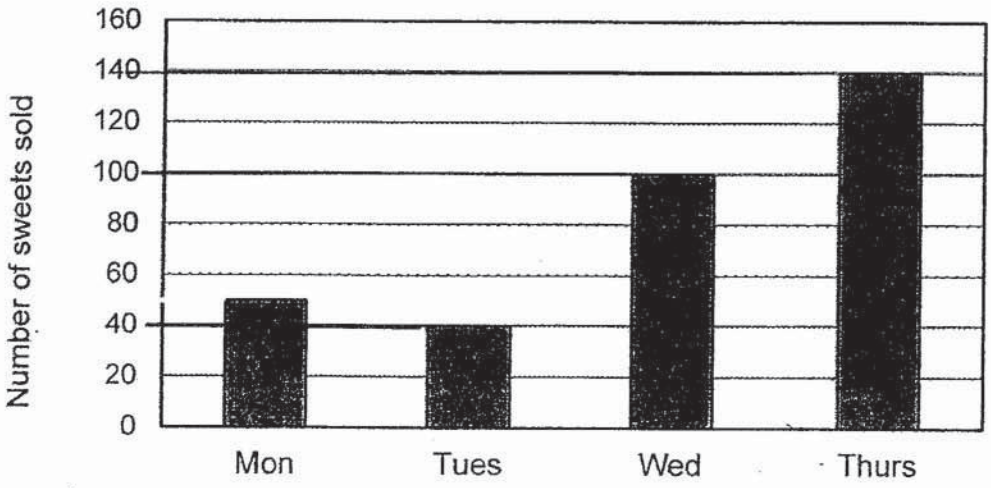


Ans: _____ cm^2

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5. The line graph below shows the number of sweets sold by a shop from Monday to Thursday.



What was the percentage increase in the number of sweets sold by the shop on Thursday as compared to Tuesday?

Ans: _____ %

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For Questions **6** to **17,** 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. For questions which require units, give your answers in the units stated.

(45 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

Do not write in this space

6. In a post office, the postal charges for different masses were shown in the table below. On Monday, Mr Tan posted 3 small toys of 25 g each and 1 large toy of 30 g using a regular box. On Tuesday, he posted 5 large toys of 35 g each using an upsized box.

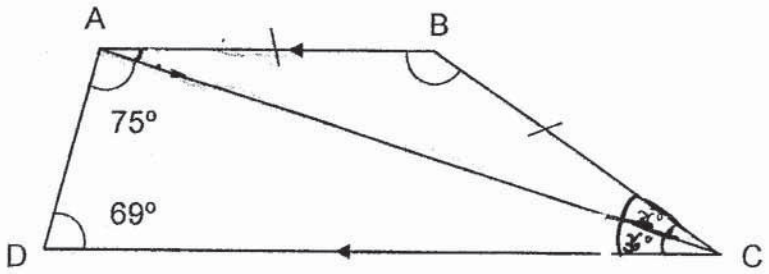
Mass Step Not Over	Regular box	Upsized box
25 g	\$0.30	\$1.80
50 g	\$0.40	
150 g	\$1.20	
250 g	\$2.20	\$3.00
500 g	\$3.50	\$5.00

If he posted both orders together on Wednesday in one upsized box, what is the difference in costs as compared to posting them on separate days?

Ans: _____ [3m]

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7. In the figure, ABCD is a trapezium and ABC is an isosceles triangle. AB // CD, AB = BC and AC is a straight line. ∠CAD = 75° and ∠ADC = 69°. Find ∠ABC.



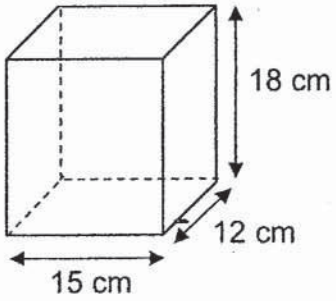
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Ans: _____ [3m]

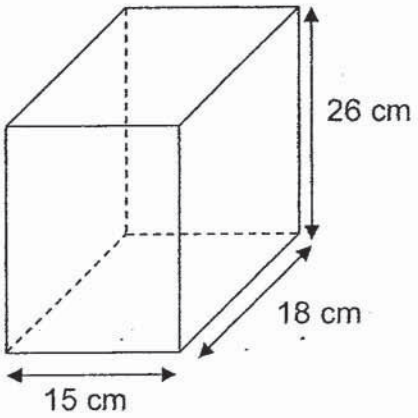
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8. Tank A is fully filled with water while Tank B is empty. Jen poured water from Tank A into Tank B until the water level in the 2 tanks is the same. What is the height of the water in tank B in the end?

Do not write in this space



Tank A



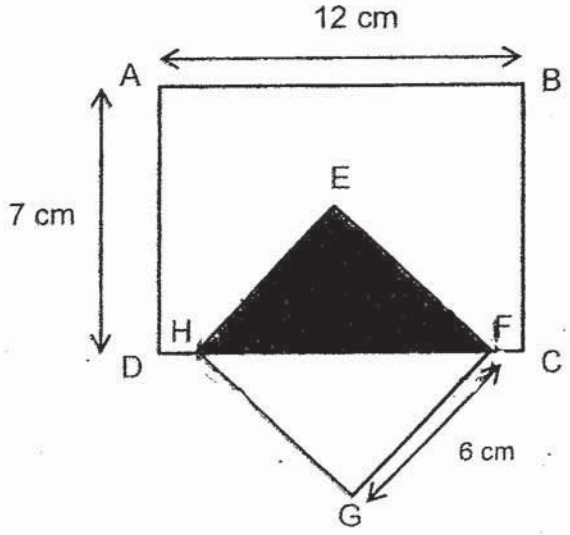
Tank B

Ans: _____ [3m]

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9. ABCD is a rectangle which overlaps the square EFGH as shown. Find the ratio of the shaded region to the unshaded region. Give your answer in the simplest form.

Do not write in this space



Ans: _____ [3m]

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10. Mei Mei bought a total of 119 strawberry jelly and longan jelly for her birthday party. After her friends had eaten $\frac{5}{8}$ of the strawberry jelly and $\frac{2}{3}$ of the longan jelly, an equal number of strawberry and longan jelly were left. How many jelly of each type did she buy?

Do not write in this space

Ans: Strawberry: _____.

Longan: _____

[4m]

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11. John and Leesha had 2160 stamps. John gave 30% of his stamps to Leesha. Leesha then sold 50% of her stamps. They had 1269 stamps left in the end. How many stamps did John have in the end?

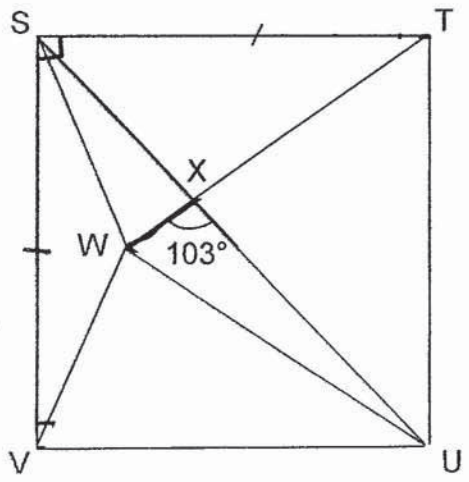
Do not write in this space

Ans : _____ [3m]

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12. In the figure below, STUV is a square. ST = TW. ∠WXU = 103°. Find ∠XUW.

Do not write in this space



Ans: _____ [4m]

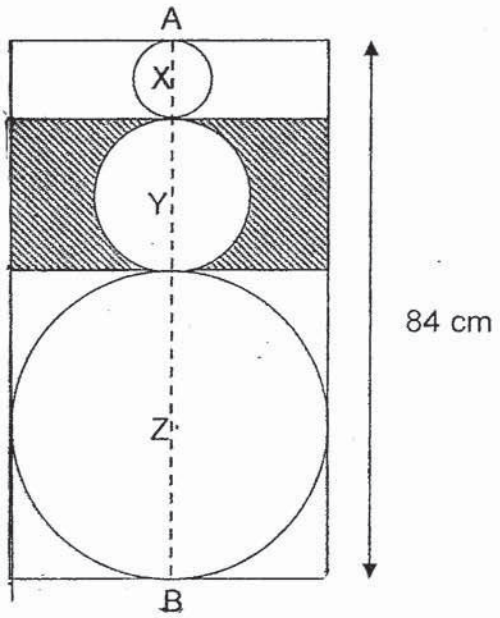
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13. The figure below is formed by a rectangle and three circles X, Y and Z. The diameter of circle X is half that of circle Y and the diameter of circle Y is half that of circle Z. Line AB is the line of symmetry of the figure. (Take π = 3.14)

Do not write in this space

(a) What is the radius of circle X?

(b) Find the shaded area.



Ans (a) _____ [1m]

(b) _____ [3m]

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14. Molly had some 20-cent and 50-cent coins.
$\frac{7}{8}$ of the coins were 20-cent coins and the rest were 50-cent coins.
After Molly had spent \$78 worth of 50-cent coins and $\frac{3}{7}$ of the 20-cent coins, she had $\frac{4}{7}$ of the coins left. Find the number of 50-cent coins Molly had left.

Do not write in this space

Ans: _____ [4m]

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15. A cafe had a promotion. For every 3 adults who ordered a set lunch each, the 4th adult would get a set lunch free. There was a 70% discount given for each child's set lunch.

Do not write in this space

The price of 1 set lunch for each child and adult is shown below.



(a) Boston planned a birthday celebration for 5 adults and 3 children. How much would he have to pay altogether?

(b) During payment, Boston saw that he was also charged a GST of 7% on the bill. How much GST did he pay? Give your answer correct to 2 decimal places.

Ans: (a) _____ [3m]

(b) _____ [2m]

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16. Xiao Li wanted to buy a dress. She saw a pink dress on sale at 10% discount and a yellow dress at 20% discount. Both dresses had the same discounted price.

To buy both dresses, Xiao Li needs $16 more than what she had. She bought the yellow dress and had $92 left.

(a) What was the discount given for the yellow dress?

(b) How much money did Xiao Li have at first?

Do not write in this space

Ans: (a)_____ [2m]

(b)_____ [2m]

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17. Mrs Daisy packed and sold chocolates in big boxes of 8 and small boxes of 5.

Do not write in this space

At first, there were twice as many small boxes of chocolates as big boxes. She sold half the number of small boxes and some big boxes. She had 320 chocolates left in all these boxes.

The number of chocolates left in the small boxes was three times the number of chocolates left in the big boxes. Find the total number of big and small boxes Mrs Daisy used to pack all the chocolates.

Ans: _____ [5m]

End of paper
Have you checked your work?

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Answer Key & Worked Solutions

Rosyth Paper

P6 Mathematics SA1 2018

Paper 1

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

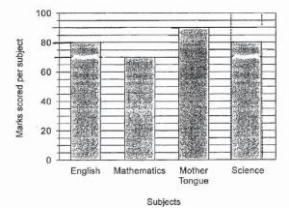
Q16) 40

Q17) 240 °

Q18) 60%

Q19) 36 cm

Q20)



Q21) 2.03 kg

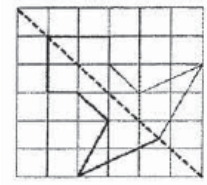
Q22) $4.50

Q23) $\frac{1}{2}$

Q24) 38 °

Q25) 6 m

Q26)



Q27) 8

Q28) (4 π + 16) cm

Q29) 50 cm^2

Q30) (9 π – 18) cm^2

Paper 2

Q1. 100% - 30% = 70%
70% - 30% = 40%
40% → 1.60
100% → $\frac{1.60}{40}$ x 100 = $4

Q2. Left egg tarts → 18b – 2b = 16b
Each child → 16b ÷ 4 = 4b

Q3. (i) Not possible to tell
(ii) False

Q4. $\frac{3}{4}$ x 35 x 35 x π = 2886.3382 ≈ 2886.34 cm^2

Q5. Increase → 140 – 40 = 100, $\frac{100}{40}$ → 250%

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Worked Solutions

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. Total mass of toys on Monday = 25 x 3 + 30 = 105g
Postal charges for Monday using regular box = $1.20

Total mass of toys on Tuesday = 5 x 35 = 165 g
Postal charges using upsized box = $3.00

Total postal charges if mailed separately = 1.20 + 3.00 = $4.20

Total mass if mailed together on Wednesday = 105 + 165 = 270g
Total postage charges when mailed together in upsized box = $5.00

Difference in costs = 5.00 – 4.20 = $0.80

Ans: $0.80

---

7. ∠BAD = 180 – 69 = 111°

∠BAC = 111 – 75 = 36°

∠ABC = 180 – 36 – 36 = 108°

Ans: 108°

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8. Volume of Tank A = 15 x 12 x 18 = 3240 cm^3

Base area of Tank A = 15 x 12 = 180 cm^2

Base area of Tank B = 15 x 18 = 270 cm^2

Let h = final height of both tanks

Volume of Tank A plus Volume of Tank B = 3240

180h + 270h = 3240

450h = 3240

h = 3240 ÷ 450 = 7.2 cm

Ans: 7.2 cm

---

9. Shaded area = 6 x 6 ÷ 2 = 18 cm^2

Unshaded area = 12 x 7 = 84 cm

Ratio of shaded region to unshade region → 18 : 84 → 3 : 14

Ans: 3 : 14

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10. Let 8u = number of strawberry jelly at first
3p = number of longan jelly at first

At the end,
Remainder strawberry jelly equals remainder longan jelly
3u = p

At first,
8u + 3p = 119
8u + 3 x 3u = 119
17u = 119
u = 119 ÷ 17 = 7

Number of strawberry jelly bought = 8u = 8 x 7 = 56
Number of longan jelly bought = 3p = 3 x 3u = 3 x 3 x 7 = 63

Ans: 56 strawberry
63 longan

---

11. 50% of Leesha's stamps after John's gift = 2160 – 1269 = 891

100% of Leesha's stamps after John's gift = 891 x 2 = 1782

70% of John's stamp = 2160 – 1782 = 378

Ans: 378 stamps

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12. $\angle TXU = 180 - 103 = 77°$

$\angle XUT = 90 \div 2 = 45°$

$\angle XTU = 180 - 77 - 45 = 58°$

$\angle TUW = (180 - 58) \div 2 = 61°$

$\angle XUW = 61 - 45 = 16°$

Ans: 16°

---

13. a)
Let diameter of circle X = u
Diameter of circle Y = 2u
Diameter of circle Z = 4u

4u+ 2u + u = 7u = 84
u = 84 ÷ 7 = 12
Radius of circle X = 12 ÷ 2 = 6 cm

b)
Breadth of large rectangle = 4u = 4 x 12 = 48 cm
Breadth of rectangle that box circle Y = 2u = 2 x 12 = 24 cm
Area of rectangle that box circle Y = 48 x 24 = 1152 cm^2
Radius of circle Y = u = 12 cm
Area of circle Y = 3.14 x 12 x 12 = 452.16 cm

Shaded area = 1152 – 452.16 = 699.84 cm^2

Ans: 699.84 cm^2

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14. Let total number of coins at first = 56u

Number of 50-cent coins at first = $\frac{1}{8}$ of the coins = 7u

Number of 20-cent coins at first = 49u

Number of 20-cent coins left = $\frac{4}{7}$ x 49u = 28u

Number of 50-cent coins spent = 78 ÷ 0.5 = 156

Number of 50-cent coins left = 7u - 156

Total number of coins left = $\frac{4}{7}$ x 56u = 32u =

Number of 20-cent coins left plus number of 50-cent coins left

28u + 7u -156 = 32u

3u = 156

u = 156 ÷ 3 = 52

Number of 50-cent coins left = 7u – 156 = 7 x 52 – 156 = 208

Ans: 208

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15. a)
Price of set lunch for first 4 adults = 3 x 48 = $144
Price of set lunch for 5 adults = 144 + 48 = $192
Price of set lunch for 3 children = 0.3 x 3 x 28 = $25.20
Total price of birthday celebration = 192 + 25.20 = $217.20

b)
GST paid = 0.07 x 217.20 = $15.204 ≈ $15.20

Ans: $15.20

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16. a)
Cost difference between 1 and 2 discounted dresses = 92 + 16 = $108
20% discounted price of yellow dress = 80% of price = $108
20% of price = 108 ÷ 4 = $27

b)
Money Xiao Li had at first = 108 + 92 = $200

Ans: $200

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17. Let number of big boxes = 3u

Number of small boxes = 6u

After selling half of small boxes, number of small boxes = $\frac{1}{2}$ x 6u = 3u

number of chocolates left in small boxes = 3u x 5 = 15u

Number of chocolates left in bigh boxes = 15u ÷ 3 = 5u

Total number of chocolates left = 15u + 5u = 320

20u = 320

u = 320 ÷ 20 = 16

Number of big and small boxes = 3u + 6u = 9u = 9 x 16 = 144

Ans: 144 boxes

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