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**Anglo-Chinese School (Junior)/  
Anglo-Chinese School (Primary)**



**COMBINED PRELIMINARY EXAMINATION (2014)  
PRIMARY 6**

**MATHEMATICS**

**PAPER 1  
Booklet A**

**Wednesday**

**20 AUGUST 2014**

**50 min**

**INSTRUCTIONS TO PUPILS**

1. Do not turn over this page until you are told to do so
2. Follow all instructions carefully.
3. Answer all questions.
4. Shade your answers in the Optical Answer Sheet (OAS) provided.
5. The use of calculators is **NOT** allowed

**Name :** \_\_\_\_\_ (      )

**Class :** 6.(      )

**Parent's Signature:** \_\_\_\_\_

**This question paper consists of 9 printed pages. (Inclusive of 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 or 4) on the  
Optical Answer Sheet (OAS). (20 marks)

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1. Which one of the following numbers is the smallest?

- 1) 0.807
- 2) 0.087
- 3) 0.708
- 4) 0.078

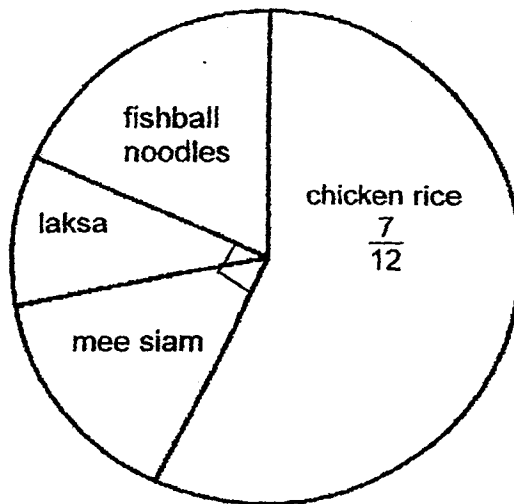
2. Express 2 h 5 min in minutes.

- 1) 65 minutes
- 2) 125 minutes
- 3) 205 minutes
- 4) 250 minutes

3. Round off 38 949 to the nearest hundred.

- 1) 38 900
- 2) 38 940
- 3) 38 950
- 4) 39 000

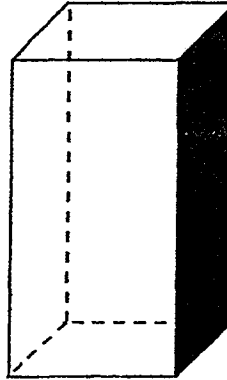
4. The pie chart shows the favourite food of a group of children. What is the ratio of the number of children who chose fishball noodles to the number of children who chose chicken rice?



- 1) 1 : 2
- 2) 1 : 7
- 3) 1 : 6
- 4) 2 : 7

5. The figure below shows a cuboid with a square base of area  $25 \text{ cm}^2$ . The height of the cuboid is  $7 \text{ cm}$ . What is the area of the shaded face?

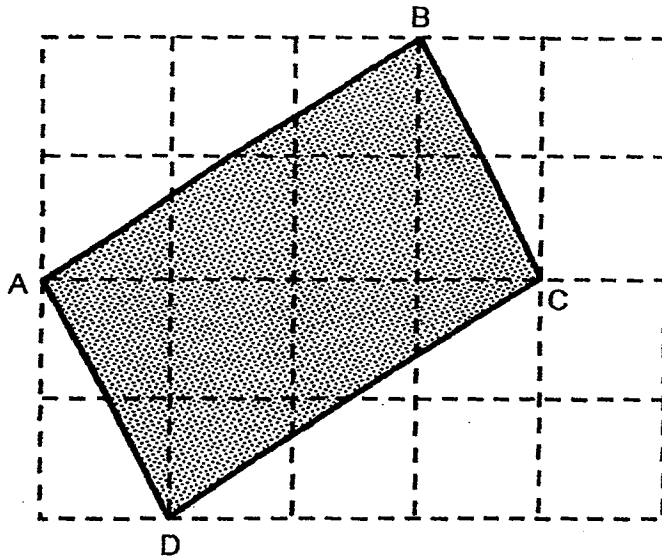
- 1)  $5 \text{ cm}^2$
- 2)  $35 \text{ cm}^2$
- 3)  $125 \text{ cm}^2$
- 4)  $175 \text{ cm}^2$



6. Mrs Tan has \$540. She spent  $\frac{1}{4}$  of her money on Saturday and  $\frac{2}{5}$  of her money on Sunday. How much more did she spend on Sunday than on Saturday?

- 1) \$81
- 2) \$135
- 3) \$216
- 4) \$351

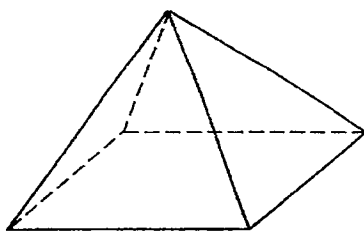
7. Quadrilateral ABCD is drawn on a square grid.  
Quadrilateral ABCD is a \_\_\_\_\_.



- 1) Rhombus
  - 2) Rectangle
  - 3) Trapezium
  - 4) Parallelogram
8. If  $y = 6$ , what is the value of  $13 - (5 + y - \frac{2y}{3})$ .

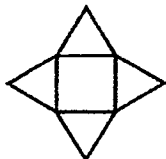
- 1) 10
- 2) 7
- 3) 6
- 4) 4

9. The figure below shows a right pyramid with a square base.

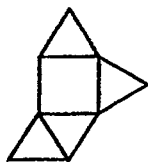


Which one of the following is not a net of the solid?

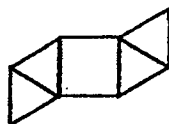
1)



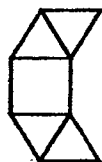
2)



3)



4)



10. The number of pigs in a farm is twice the number of chickens. A pig has 4 legs and a chicken has 2 legs. Given that there are 6 chickens, find the total number of legs these animals have.

- 1) 24
- 2) 36
- 3) 48
- 4) 60

11. Study the table below.

Fitness Test Standards for Boys		
Performance Grade	Points	Standing Broad Jump
A	5	More than 202 cm
B	4	189 – 202 cm
C	3	176 – 188 cm
D	2	163 – 175 cm
E	1	150 – 162 cm

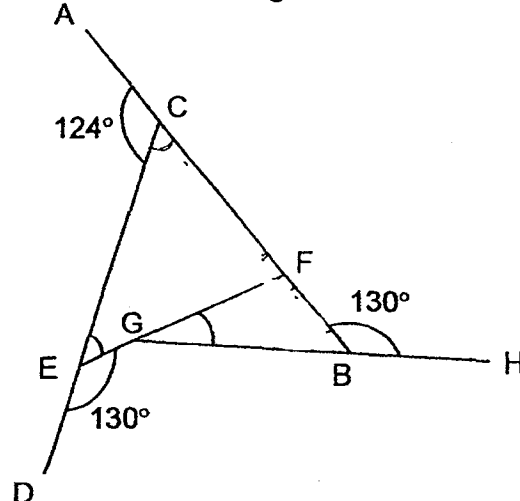
At the Standing Broad Jump station, Henry jumped a distance of 179 cm and Wayne jumped a distance of 206 cm. How far must Tim jump so that the average number of points of the three boys was 4 points?

- 1) 157 cm
- 2) 170 cm
- 3) 184 cm
- 4) 202 cm

12. The amount of money Sam had to the amount of money Gerald had was 4 : 3. Sam had \$18 more than Gerald. He gave some money to Gerald and the amount of money Sam had to the amount of money Gerald had became 1 : 2. How much did Sam give to Gerald?

- 1) \$6
- 2) \$18
- 3) \$30
- 4) \$90

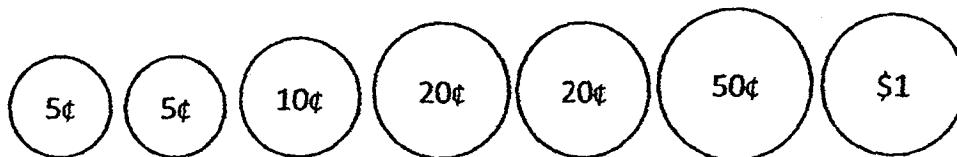
13. In the figure, AB, CD, EF and GH are straight lines. Find  $\angle FGH$ .



- 1)  $24^\circ$
- 2)  $50^\circ$
- 3)  $56^\circ$
- 4)  $74^\circ$



14. Amy had the following coins in her coin pouch.



She took out 3 coins from her pouch and placed them into a donation can. Which of the following amounts could not be the amount taken out of her pouch?

- 1) \$ 0.45
  - 2) \$ 0.75
  - 3) \$ 0.85
  - 4) \$ 1.15
15. 5 similar tins and 8 similar bottles can hold 36 litres of oil. Given that each tin can hold twice as much oil as each bottle, how much oil can each tin hold?

- 1) 16ℓ
- 2) 2ℓ
- 3) 20ℓ
- 4) 4ℓ

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Anglo-Chinese School (Junior)/  
Anglo-Chinese School (Primary)



**COMBINED PRELIMINARY EXAMINATION (2014)**  
**PRIMARY 6**

**MATHEMATICS**

**PAPER 1**  
**Booklet B**

**Wednesday**

**20 AUGUST 2014**

**50 min**

**INSTRUCTIONS TO PUPILS**

1. Do not turn over this page until you are told to do so
2. Follow all instructions carefully.
3. Answer all questions.
4. Write your answers in this booklet.
5. The use of calculators is **NOT** allowed

**Name :** \_\_\_\_\_ (       )

**Class : 6.**(       )

**Parent's Signature:** \_\_\_\_\_

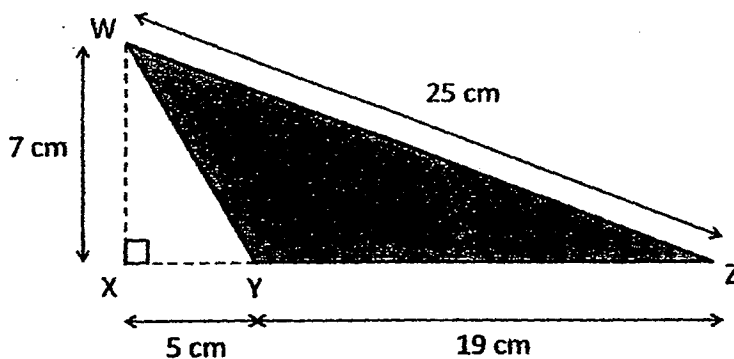
**This question paper consists of 9 printed pages. (Inclusive of cover page)**

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated and to its simplest form whenever necessary. (10 marks)

16. What does the digit 4 in 946 782 stand for?

Answer : \_\_\_\_\_

17. In the figure below, XYZ is a straight line. What is the area of triangle WYZ?

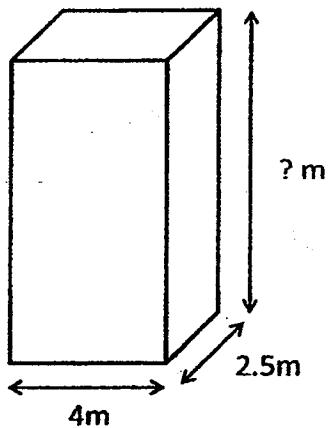


Answer : \_\_\_\_\_  $\text{cm}^2$

18. Mrs Bala went to a fruit store with \$50. She bought 2 papayas and 9 apples. 1 papaya cost \$2k and 3 apples cost \$k. How much had she left after her purchases? Give your answer in terms of k in its simplest form.

Answer : \$ \_\_\_\_\_

19. The capacity of the rectangular tank shown below is  $89 \text{ m}^3$ . What is the height of the tank?

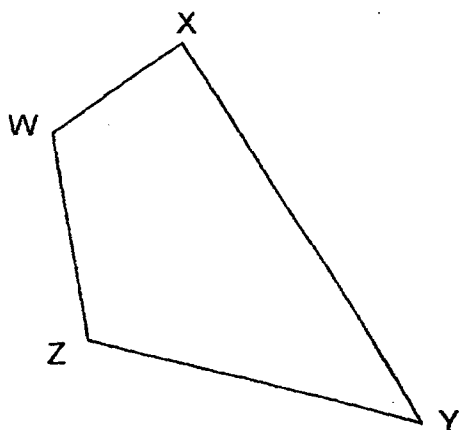


Answer : \_\_\_\_\_ m

20. Dave finished his 1.6 km run in 9 min 39 s. Muthy finished his 1.6 km run in 7 min 45 s. How much faster was Muthy in the 1.6 km run? Give your answer in seconds.

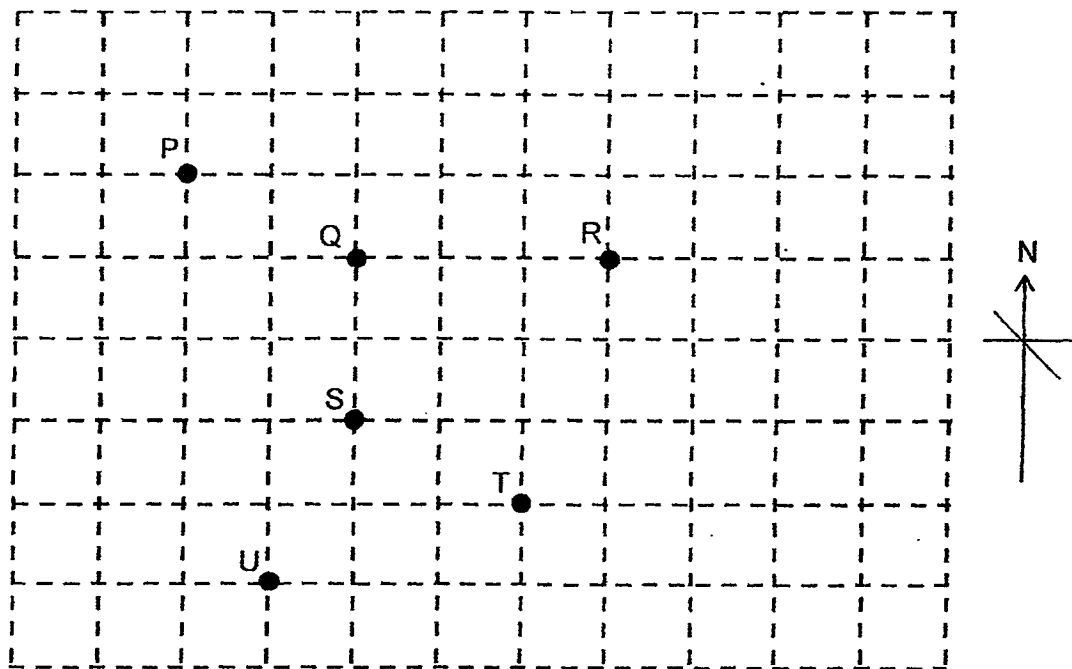
Answer : \_\_\_\_\_ s

21. Measure and write down the size of  $\angle XYZ$ .



Answer : \_\_\_\_\_ °

22. Refer to the square grid below and fill in the blanks with P, Q, R, S, T or U.



Point \_\_\_\_\_ is north-west of Point \_\_\_\_\_.

Answer : \_\_\_\_\_ and \_\_\_\_\_

23. Peter had a piece of string that was 3.05 m long. He cut off 2.5 m from it. What is the length of the remaining string?

Answer : \_\_\_\_\_ cm

24. Simplify  $95 \div (7 - 2) + 4 \times 2$ .

Answer : \_\_\_\_\_

25. The sum of 2 numbers is 220. Their difference is 20. What is the greater number?

Answer : \_\_\_\_\_

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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)

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26. Silas has \$m. Muthu has \$8 more than Silas. Ken has half of what Silas and Muthu have altogether. How much does Ken have?

Answer : \$ \_\_\_\_\_

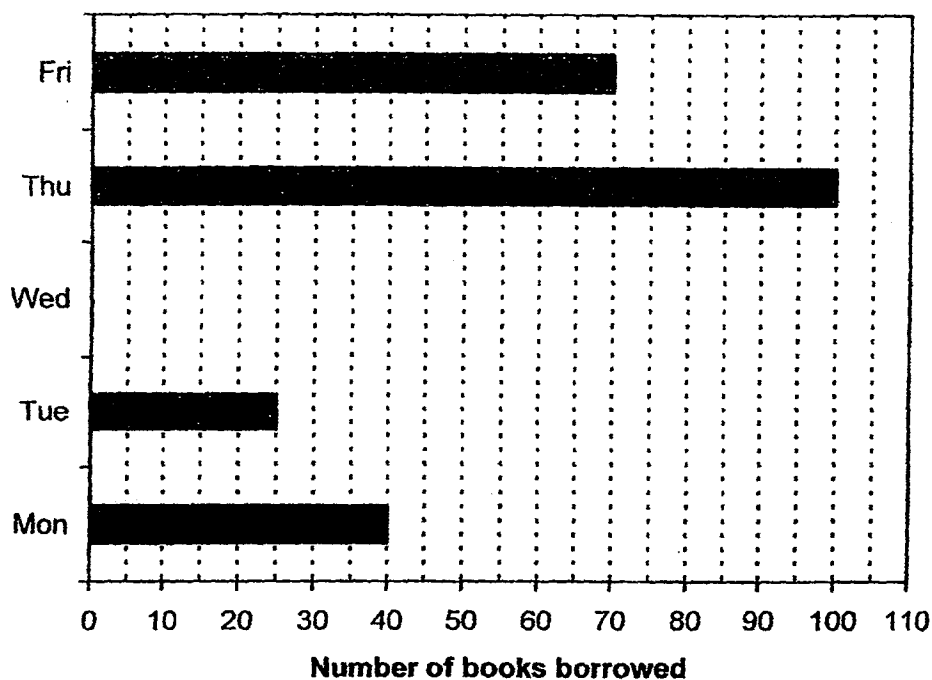
27. Mrs Lee had \$210. She spent 40% of her money on a dress. She then spent 20% of the remainder on a scarf. How much did she spend on the scarf?

Answer : \$ \_\_\_\_\_

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28. The graph below shows the number of books the pupils borrowed from a school library in five days. The bar that shows the number of books borrowed on Wednesday has not been drawn.



- (a) The average number of books borrowed each day from Monday to Friday was 64. Find the total number of books borrowed on **Wednesday**.

Answer : \_\_\_\_\_

- (b) What was the percentage decrease in the number of books borrowed from Monday to Tuesday?

Answer : \_\_\_\_\_ %

29. The perimeter of a rectangle is 72cm. Its length is 3 times its breadth. What is the area of this rectangle?

Answer : \_\_\_\_\_  $\text{cm}^2$

30. Susan bought a pizza and ate  $\frac{1}{3}$  of it. She cut the remaining equally into 4 slices. What fraction of the whole pizza was each slice?

Answer : \_\_\_\_\_

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**Anglo-Chinese School (Junior)/  
Anglo-Chinese School (Primary)**



**COMBINED PRELIMINARY EXAMINATION (2014)  
PRIMARY 6**

**MATHEMATICS**

**PAPER 2**

**Wednesday**

**20 AUGUST 2014**

**1hr 40 min**

**INSTRUCTIONS TO PUPILS**

1. Do not turn over this page until you are told to do so
2. Follow all instructions carefully.
3. Answer all questions.
4. Show all your workings as marks are awarded for correct working.
5. Write your answers in this booklet.
6. The use of an approved calculator is expected, where appropriate.

**Name :** \_\_\_\_\_ (       )

**Class :** 6.(       )

**Parent's Signature:** \_\_\_\_\_

Booklet / Paper	Possible Marks	Marks Obtained
Booklet A	20	
Booklet B	20	
Paper 2	60	
Total	100	

**This question paper consists of 15 printed pages. (Inclusive of cover page).**

Questions 1 to 5 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)

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1. The average age of 3 boys is 12 yrs 3 mths. When another boy joins the group, their average age becomes 11 yrs 7 mths. What is the age of the fourth boy in years and months?

Answer : \_\_\_\_\_ yrs \_\_\_\_\_ mths

2. The following table shows the amount paid to workers per hour by a fast food company.

	Weekday Rate	Weekend Rate
FriesQueen	\$6.55 / hr	\$10.25 / hr

Every week, Mitch works 4 weekdays for 6 hours each day and on Saturday for 8 hours. How much does he earn in a week?

Answer : \$ \_\_\_\_\_

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3. Danny is making some Bubble Tea according to the following recipe.

**Bubble Tea**  
(makes 3 glasses)

45g soya powder  
250ml water  
25g pearls

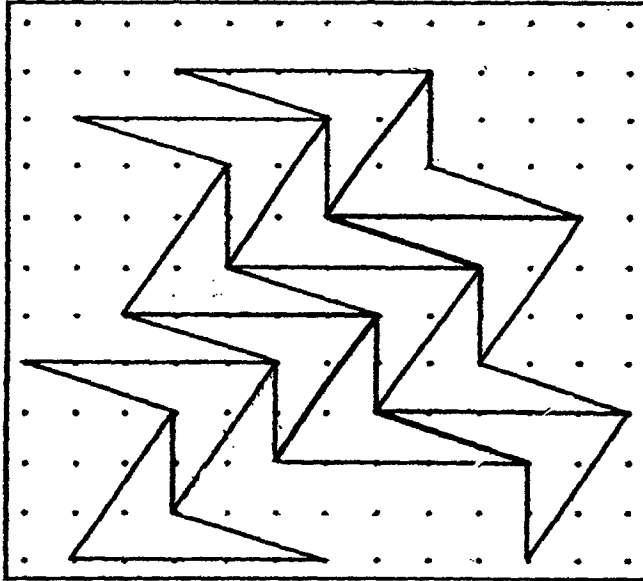
He has 160g of soya powder, 1050ml of water and 200g of pearls. What is the maximum number of glasses of Bubble Tea he can make?

Answer: \_\_\_\_\_

4. Michael had 8 stickers more than Andy. Andy had 10 stickers more than Franklin. Given that the three boys had a total of 280 stickers, how many stickers did Michael have?

Answer : \_\_\_\_\_

5. The pattern in the box shows part of a tessellation. Extend the tessellation by drawing **two** more unit shapes in the space provided within the box.

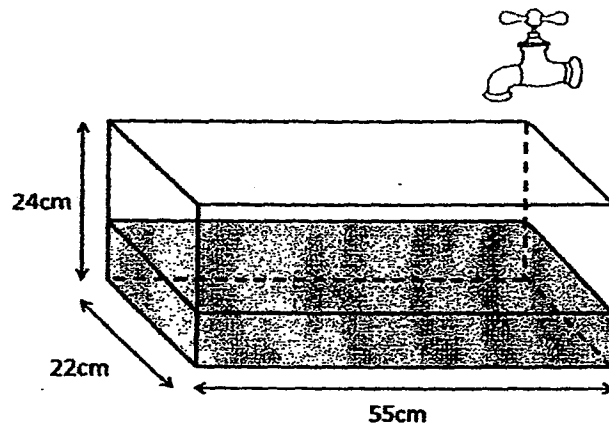


For questions 6 to 18, show your working clearly question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

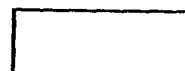
6. The total amount of water in Jar A and Jar B is 1050 ml. The total amount of water in Jar B and Jar C is 1320 ml. The amount of water in Jar A is  $\frac{1}{2}$  the amount of water in Jar C. What is the average amount of water in the three jars?

Answer : \_\_\_\_\_ [3]

7. A tank was  $\frac{1}{3}$  filled with water at first. Dillon turned on a tap and let water flow into the tank at a rate of 1.36 l per minute. After 15 minutes, he turned off the tap. How much water had overflowed?



Answer : \_\_\_\_\_ [3]



8. DIZ Orchestra performed at the concert hall on two evenings. On the first evening, there were 70 more men than women in the audience. On the second evening, the number of men decreased by 10% and the number of women increased by 20%. Given that there were 1428 men and women on the second evening, how many men were present on the second evening?

Answer : \_\_\_\_\_ [3]

9. Three sisters gave an equal amount of money to buy a present for their mother. Tracy used  $\frac{3}{5}$  of her money, Nancy used  $\frac{1}{2}$  of her money and Lancy used  $\frac{2}{3}$  of hers. They had a total of \$1395 at first. How much money did each sister give for the present?

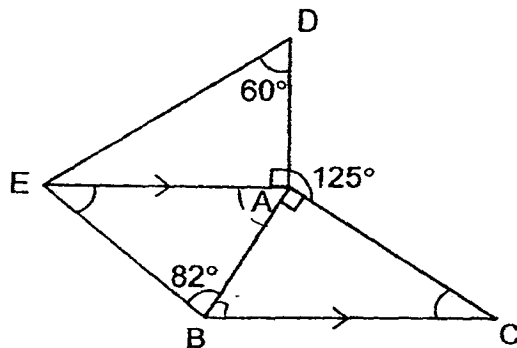
Answer : \_\_\_\_\_ [3]

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10. In the figure,  $ABC$  and  $ADE$  are right-angled triangles and  $EA$  is parallel to  $BC$ .

Find (a)  $\angle ACB$ , and  
(b)  $\angle AEB$ .

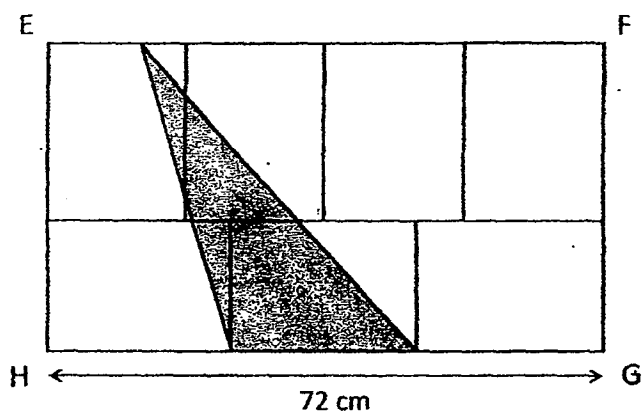


Answer : (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [1]

11. In the figure below, rectangle EFGH is made up of 7 identical rectangles.

- (a) Find the perimeter of rectangle EFGH.
- (b) Find the area of the shaded triangle.



Answer : (a) \_\_\_\_\_ [3]

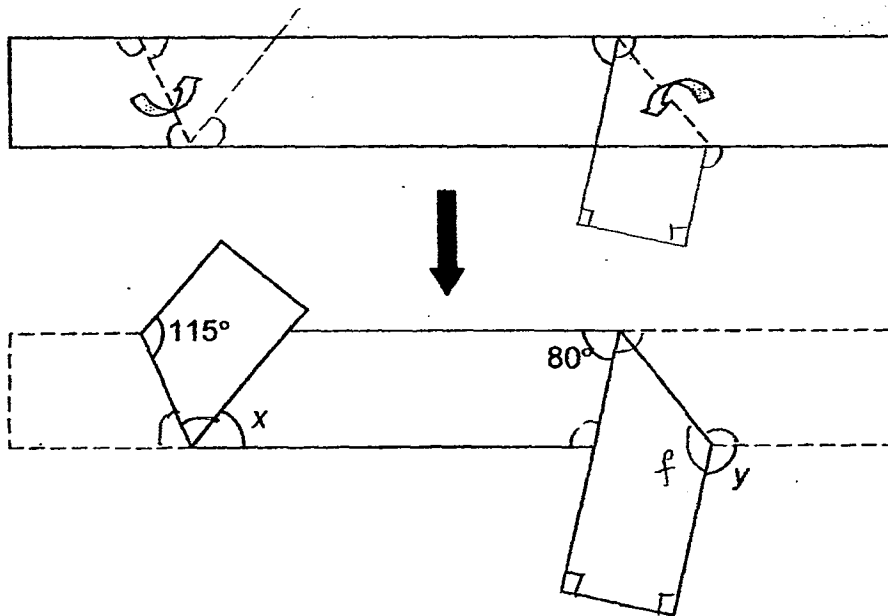
(b) \_\_\_\_\_ [1]

12. Josiah, Gerald and Marcus had a total of 1280 stamps in their collection.

Josiah gave away  $\frac{2}{5}$  of his stamp collections. Gerald gave away 120 stamps and Marcus gave away twice as many stamps as Josiah. In the end, they had 740 stamps left. How many stamps did Gerald and Marcus have altogether in the end?

Answer : \_\_\_\_\_ [4]

13. A piece of paper in the shape of a rectangle is folded along the dotted line as shown below.  
Find (a)  $\angle x$ , and  
(b)  $\angle y$



Answer : (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

14. At 08 00, Ruben started from Town X and travelled towards Town Y and did not change his speed. At 09 00, Mingwei started his journey from Town X towards Town Y at an average speed of 72 km/h. Mingwei overtook Ruben at 12 00. After overtaking, Mingwei carried on his journey at the same average speed and reached Town Y at 14 30.

- (a) Find Ruben's average speed, in km/h.  
(b) What is the distance between Town X and Town Y?

Answer : (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

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15. The water bill is charged at the following rates:

First 20 units	\$0.73 per unit
Next 20 units	\$0.90 per unit
<del>Above</del> 40 units	\$1.21 per unit

After

- (a) Mr Tan's family used 28 units. How much did Mr Tan pay?  
(b) Mr Lee's family used 48 units. How much did Mr Lee pay?  
(c) If Gary's family paid \$26.30 for the water bill, how many units did they use?

Answer : (a) \_\_\_\_\_ [1]

(b) \_\_\_\_\_ [1]

(c) \_\_\_\_\_ [2]

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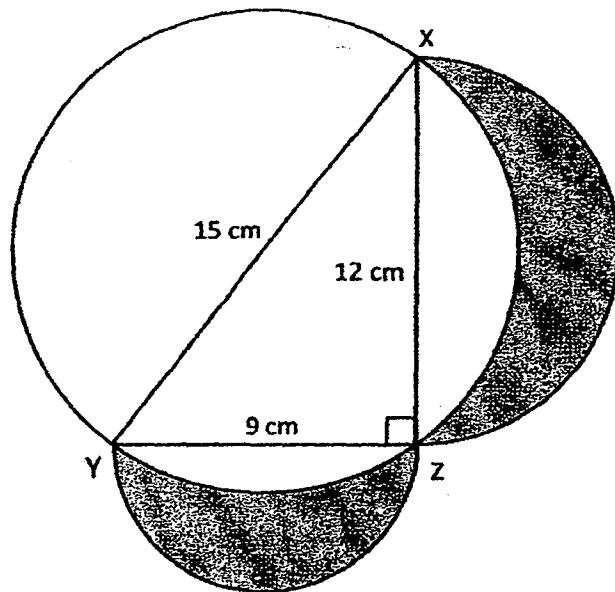
16. John spent \$4968 on bags and shoes. The number <sup>of pairs</sup> of shoes he bought was  $\frac{2}{5}$  the number of bags he bought. The cost of a pair of shoes was \$12 more than the cost of a bag. He paid \$1512 more on bags than on shoes. Find the cost of a bag.

Answer : \_\_\_\_\_ [5]

17. The figure below is made up of a circle and 2 semi-circles. XY is the diameter of the circle. XY is 15 cm, XZ is 12 cm and YZ is 9 cm.

- (a) What is the total area of the shaded parts?  
(b) What is the total perimeter of the shaded parts?

(Take  $\pi = 3.14$ )



Ans: (a) \_\_\_\_\_ [3]

(b) \_\_\_\_\_ [2]

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18. There were a total of 665 black and red pens in a box. The number of black pens to the number of red pens was 3 : 4. Some green pens and purple pens were put into the box. For every 5 red pens that were already in the box, 12 purple ones were added. Then the final number of black pens and green pens was  $\frac{1}{4}$  the final number of red pens and purple pens. Find the ratio of the number of green pens to the number of purple pens. Give your answer in its simplest form.

Answer : \_\_\_\_\_ [5]

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**End of Paper 2**

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## Exam Paper 2014 Answer Sheet

School: ANGLO-CHINESE SCHOOL (JUNIOR/PRIMARY)

Subject: PRIMARY 6 MATHEMATICS

Term: COMBINED PRELIM

### Paper 1

1)	4	6)	1	11)	4
2)	2	7)	4	12)	3
3)	1	8)	3	13)	1
4)	4	9)	4	14)	3
5)	2	10)	4	15)	4

16. 40000

17. 66.5

18.  $(50 - 7k)$

19. 8.9

20. 114

21. 44

22. P; T

23. 55

24. 27

25. 120

26.  $S \rightarrow \$m$

$M \rightarrow \$(m + 8)$

$K \rightarrow \$(\frac{2m + 8}{2})$

27. Scarf  $\rightarrow \frac{20}{100} \times 60 = 12\%$   
 $\frac{12}{100} \times \$210 = \$25.20$

28. (a)  $64 \times 5 = 320$   
 $40 + 25 + 70 + 100 = 235$   
 $320 - 235 = 85$   
(b)  $40 - 25 = 15$   
 $\frac{15}{40} \times 100\% = 37.5\%$

29.  $8u \rightarrow 72$   
 $1u \rightarrow 9$   
 $3u \rightarrow 27$

$$27 \times 9 = 243$$

$$30. \frac{2}{3} \div 4 = \frac{1}{6}$$

## Paper 2

1. 3 boys:

Average  $\rightarrow$  12 years 3 months

Total  $\rightarrow$  36 years 9 months

4 boys:

Average  $\rightarrow$  11 years 7 months

Total  $\rightarrow$  44 years 28 months

$44 - 36 = 8$  years

$28 - 9 = 19$  months

**Total: 8 years 19 months**

2. 1 weekday (6hrs)  $\rightarrow \$6.55 \times 6 = \$39.90$

4 weekdays (24hrs)  $\rightarrow \$6.55 \times 24 = \$157.20$

Weekend: 1hr  $\rightarrow \$10.25$

8 hrs  $\rightarrow \$10.25 \times 8 = \$82$

**$\$157.20 + \$82 = \$239.20$**

3.  $160 \div 45 = 3.55$

$1050 \div 250 = 4.2$

$200 \div 25 = 8$

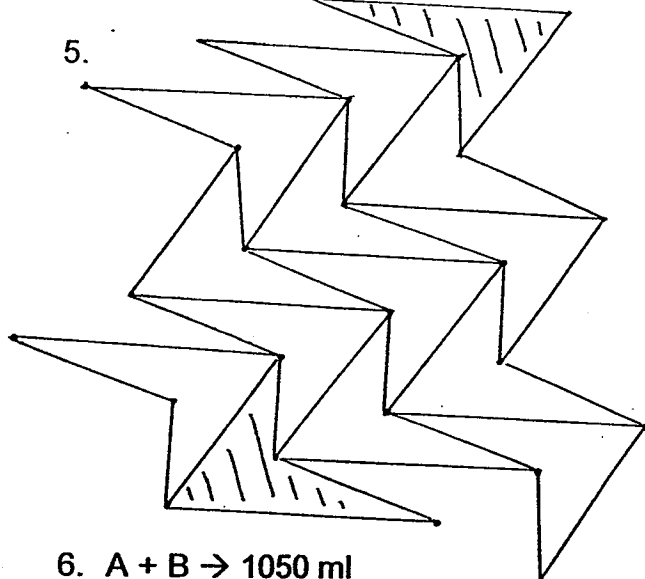
$3 \times 3 = 9$

4.  $3u \rightarrow 280 - 10 - 10 - 8 = 252$

$1u \rightarrow 84$

**$84 + 10 + 10 = 102$**

5.



6.  $A + B \rightarrow 1050$  ml

$B + C \rightarrow 1320$  ml

$1320 \text{ ml} - 1050 \text{ ml} = 270 \text{ ml (A)}$

$A \rightarrow 270 \text{ ml}$

$B \rightarrow 1050 \text{ ml} - 270 \text{ ml} = 780 \text{ ml}$

$C \rightarrow 270 \text{ ml} \times 2 = 540 \text{ ml}$

$$1590 \div 3 = 530 \text{ ml}$$

7. Total vol.  $\rightarrow 24 \times 22 \times 55 = 29040$   
 Water vol.  $\rightarrow 22 \times 55 \times 8 = 9680$   
 $29040 - 9680 = 19360 \text{ cm}^3 = 19.36 \text{ litres}$   
 $15 \text{ mins} \times 1.36 \text{ litres/min} = 20.4 \text{ litres}$   
 $20.4 \text{ litres} - 19.36 \text{ litres} = 1.04 \text{ litres}$
8. 2<sup>nd</sup> evening  
 Men  $\rightarrow 10u \times 90\% + 70 \times 90\% = 9u + 63$   
 Women  $\rightarrow 10u \times 120\% = 12u$   
 $9u + 63 + 12u = 1428$   
 $21u \rightarrow 1428 - 63 = 1365$   
 $1u \rightarrow 65$   
 Men  $\rightarrow 9 \times 65 + 63 = 648$
9.  $31u \rightarrow 1395$   
 $1u \rightarrow 45$   
 $6u \rightarrow \$270$
10. Angle EAB  $\rightarrow 360 - 90 - 90 - 125 = 55^\circ = \text{angle ABC}$   
 (a) Angle  $\rightarrow 180 - 90 - 55 = 35^\circ$   
 (b) Angle  $180 - 55 - 82 = 43^\circ$
11.  $4B \rightarrow 72$   
 $1B \rightarrow 18$   
 $3L \rightarrow 72$   
 $1L \rightarrow 24$   
 $24 + 18 = 42$   
 (a)  $42 \times 2 + 72 \times 2 = 228 \text{ cm}$   
 (b)  $0.5 \times 24 \times 42 = 504 \text{ cm}^2$
12. Give  
 $J \rightarrow \frac{2}{5} \text{ of hrs}$   
 $G \rightarrow 120$   
 $M \rightarrow \frac{4}{5} \text{ of } y$   
 $1280 - 740 = 540$   
 $\frac{6}{5} \text{ of } J \rightarrow 540 - 120 = 420$   
 $\frac{1}{5} \text{ of } J \rightarrow 70$   
 $\frac{5}{5} \text{ of } J \rightarrow 350$   
 $\frac{3}{5} \text{ of } J \rightarrow 210$   
 $740 - 210 = 530$
13. (a) Angle a  $\rightarrow 180 - 115 = 65$   
 Angle b = angle a = 65  
 Angle x =  $180 - 65 - 65 = 50^\circ$   
 (b) Angle C = Angle d =  $(180 - 80) \div 2 = 50$   
 Angle e = Angle f =  $180 - 50 = 130$   
 Angle y =  $360 - 130 - 130 = 100^\circ$

14.  $0900 \rightarrow 1430$

$(5h^{1/2}h)$

$0900 \rightarrow 1200$

$(3h)$

$72 \text{ km/h} \times 3h = 216\text{km}$

$0800 \rightarrow 1200$

$(4h)$

(a)  $216 \text{ km} \div 4h = 54\text{km/h}$

(b)  $5^{1/2}h \times 72 \text{ km/h} = 396\text{km}$

15. (a)  $1^{\text{st}} 20u \rightarrow \$0.73 \times 20 = \$14.60$

Next  $8u \rightarrow \$0.90 \times 8 = \$7.20$

$\$14.60 + \$7.20 = \$21.80$

(b)  $\$14.60 (1^{\text{st}} 20u) + (\$0.90 \times 20) + (\$1.21 \times 8) = \$42.28$

(c)  $\$26.30 - \$14.60 = \$11.70$

$\$11.70 \div \$0.90 = 13u$

$20u + 13u = 33u$

16.  $\$4968 - \$1512 = \$3456$

$\$3456 \div 2 = \$1728$  (total \$ of s)

$\$1728 + \$1512 = \$3240$

$4320 - 3240 = 1080$

$1080 \div 12 = 90$

$3240 \div 90 = \$36$

17. (a)  $0.5 \times 3.14 \times 6 \times 6 = 56.52$

$0.5 \times 3.14 \times 4.5 \times 4.5 = 31.7925$

Area of half main circle  $\rightarrow 0.5 \times 3.14 \times 7.5 \times 7.5 = 88.3125$

Area of triangle  $\rightarrow 0.5 \times 12 \times 9 = 54$

Shaded part  $\rightarrow 56.52 + 31.7925 + 54 = 88.3125\text{cm}$

(b) L S-C curve  $\rightarrow 18.84$

S S-C curve  $\rightarrow 14.13$

Main S-C curve  $\rightarrow 23.53$

Total part  $\rightarrow 23.55 + 14.13 + 18.84 = 56.52 \text{ cm}$

18. B : R

3 : 4

$7u \rightarrow 665$

$1u \rightarrow 95$

$4u \rightarrow 380$  (R)

$3u \rightarrow 285$  (B)

$5r \rightarrow 12p$

$380r \rightarrow 912p$

$r + p = 1292$

$b + g = 1292 \div 4 = 323$

$G \rightarrow 38$

G : P

38 : 912

1 : 24