



NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION 2026
PRIMARY SIX

MATHEMATICS
PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 1 hour 10 minutes

INSTRUCTIONS TO CANDIDATES

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

Name : _____ ()

Form Class : 6 _____

Teaching Group: 6M _____

Date : 20 August 2026

This booklet consists of 10 printed pages.

Questions 1 to 10 carry 1 mark each. Questions 11 to 18 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) and shade your answer on the Optical Answer Sheet.
(26 marks)

1 What is the value of digit 6 in 26 145?

- (1) 60
- (2) 600
- (3) 6000
- (4) 60 000

2 Express $1\frac{3}{50}$ as a decimal.

- (1) 1.03
- (2) 1.06
- (3) 1.30
- (4) 1.60

3 Round 123.456 to 2 decimal places.

- (1) 123.40
- (2) 123.45
- (3) 123.46
- (4) 123.50

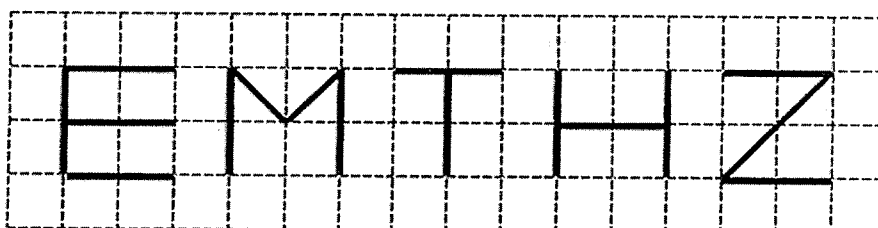
4 Which of the following is a factor of both 18 and 24?

- (1) 12
- (2) 9
- (3) 6
- (4) 4

5 The ratio of the number of squares to the number of triangles is 1 : 4.
The ratio of the number of squares to the number of circles is 2 : 3.
What is the ratio of the number of triangles to the number of circles?

- (1) 3 : 4
- (2) 3 : 8
- (3) 4 : 3
- (4) 8 : 3

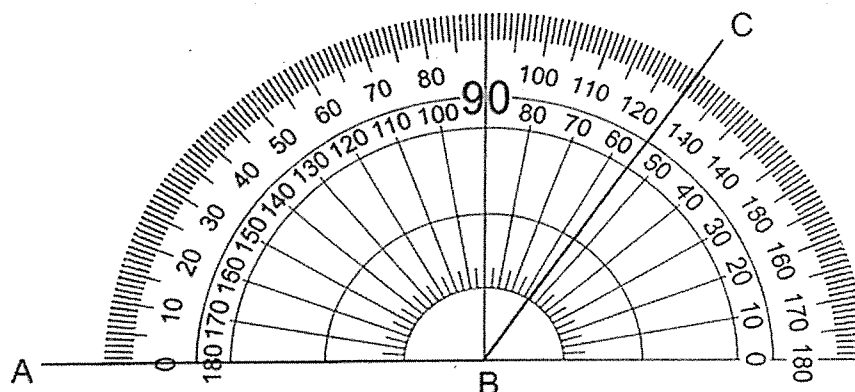
6 Five letters are drawn on the square grid.



How many of the letters have both parallel and perpendicular lines?

- (1) 1
- (2) 2
- (3) 3
- (4) 4

- 7 What is the size of $\angle ABC$?

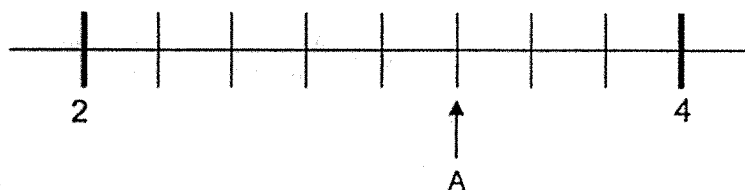


- (1) 55°
 (2) 65°
 (3) 125°
 (4) 135°
- 8 Arrange the fractions from the largest to the smallest:

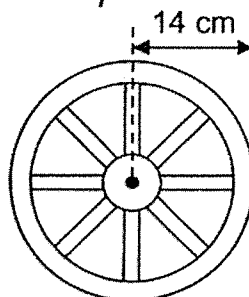
$1\frac{1}{3}$	$1\frac{1}{9}$	$\frac{5}{3}$
----------------	----------------	---------------

- | | <u>Largest</u> | , | <u>Smallest</u> | , | |
|-----|----------------|---|-----------------|---|----------------|
| (1) | $1\frac{1}{9}$ | | $1\frac{1}{3}$ | | $\frac{5}{3}$ |
| (2) | $1\frac{1}{9}$ | | $\frac{5}{3}$ | | $1\frac{1}{3}$ |
| (3) | $\frac{5}{3}$ | | $1\frac{1}{9}$ | | $1\frac{1}{3}$ |
| (4) | $\frac{5}{3}$ | | $1\frac{1}{3}$ | | $1\frac{1}{9}$ |

- 9 In the number line, what is the value represented by A?



- (1) $2\frac{5}{8}$
- (2) $3\frac{1}{8}$
- (3) $3\frac{1}{2}$
- (4) $3\frac{1}{4}$
- 10 A wheel has a radius of 14 cm. What is the distance covered by the wheel when it makes 10 complete turns? (Take $\pi = \frac{22}{7}$)

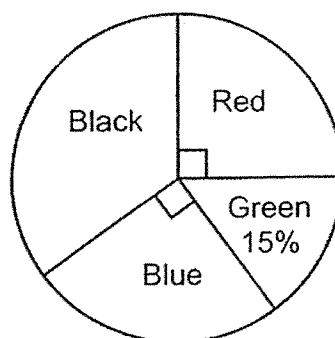


- (1) 44 cm
- (2) 88 cm
- (3) 440 cm
- (4) 880 cm

- 11 There are 400 people in a cinema. 180 of them are children.
100 of them are men and the rest of them are women.
What percentage of the people are women?

- (1) 25%
- (2) 30%
- (3) 45%
- (4) 55%

- 12 The pie chart shows the favourite colours of a group of children.



The number of children who like red is 20 more than the number of children who like green. What is the number of children who like black?

- (1) 30
- (2) 50
- (3) 70
- (4) 130

- 13 Nelly had a packet of flour. She used $\frac{1}{5}$ of the flour to make cupcakes and $\frac{1}{2}$ kg of flour to make muffins. After that, she had 100 g of flour left.

How much flour did she have at first?

(1) 250 g

(2) 500 g

(3) 750 g

(4) 800 g

? g 100 g

- 14 The following tables show Johnson's booking schedule of a badminton court at Active SG sports centre on two days and the fees for booking a badminton court.

Johnson's booking schedule		Booking rate	
Day	Time	Weekday	
Tuesday	5:00 pm to 7:00 pm	Before 6:00 pm	\$3 per hour
Saturday	9:00 am to 12 noon	After 6:00 pm	\$8 per hour
		Weekends	All day

How much did Johnson pay in total for his booking on Tuesday and Saturday?

- (1) \$20
- (2) \$30
- (3) \$35
- (4) \$40

- 15 Jane sold 12 shirts. She earned $\$n$ for each shirt she sold. She earned an additional $\$3$ for every 5 shirts sold. How much did she earn altogether?

- (1) $\$(12n + 3)$
- (2) $\$(12n + 6)$
- (3) $\$(12n + 9)$
- (4) $\$(12n + 15)$

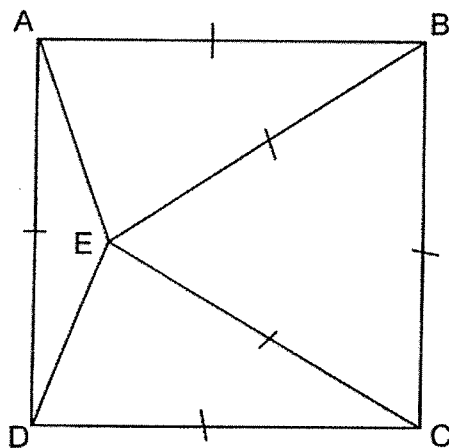
- 16 The table shows the price of food items in a fast-food restaurant.

Food	Price
1 piece of chicken and 1 piece of fish	\$6
3 pieces of chicken	\$7
2 pieces of fish	\$7

Ali wants to buy exactly 14 pieces of chicken and 14 pieces of fish.
What is the least amount of money Ali has to pay?

- (1) \$76
- (2) \$82
- (3) \$84
- (4) \$94

- 17 ABCD is a square. BEC is an equilateral triangle.



Find $\angle AEB$.

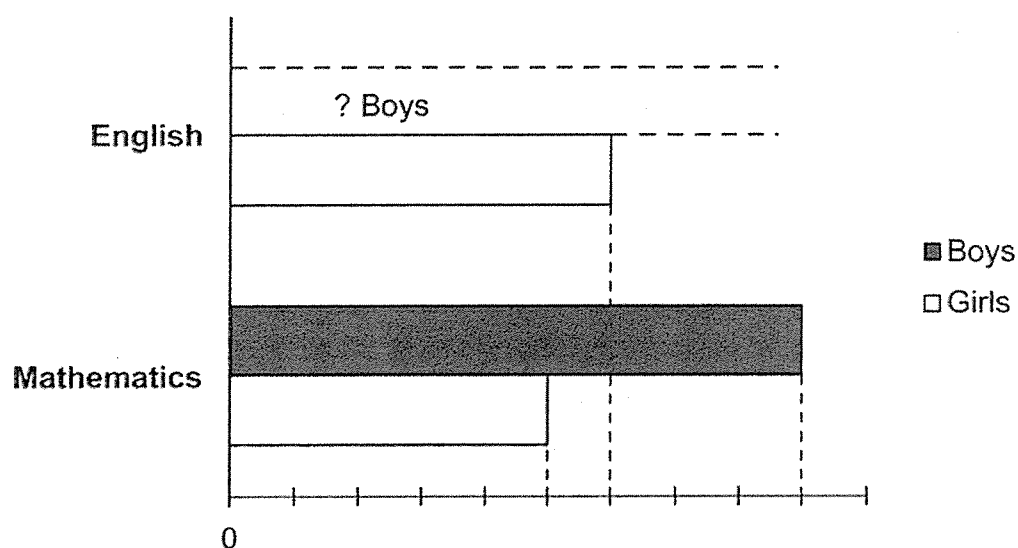
- (1) 30°
- (2) 60°
- (3) 75°
- (4) 80°

- 18 A survey was conducted on Primary 6 students to find out whether students prefer English or Mathematics. The picture graph and bar graph below show which subject the students prefer.

The representation for the symbol in the picture graph is not shown.

Our Favourite Subject							
English							
Mathematics							
Each  stands for ? children.							

The number of boys who prefer English is not shown.



What fraction of the students are boys who prefer English?

- (1) $\frac{1}{6}$
 (2) $\frac{1}{3}$
 (3) $\frac{2}{3}$
 (4) $\frac{4}{9}$

(Go on to Booklet B)



NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION 2026
PRIMARY SIX

MATHEMATICS
PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 1 hour 10 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Use dark blue or black ball point pen to write your answers in the space provided for each question.
6. Do not use correction tape/ fluid/ highlighter.
7. The use of calculators is NOT allowed.

Marks Obtained

Section		Maximum Marks	Actual Marks
Paper 1	Booklet A	26	
	Booklet B	24	
Paper 2		50	
Total		100	

Name : _____ ()

Form Class : 6 _____

Teaching Group: 6M _____

Date : 20 August 2026

This booklet consists of 9 printed pages and 1 blank page.

Questions 19 to 30 carry 2 marks each. Show your workings clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
(24 marks)

19 (a) Find the value of $9205 - 48$

Ans: (a) _____

(b) Find the value of 160×25

Ans: (b) _____

20 (a) Find the value of $\frac{2}{3} - \frac{1}{4}$

Ans: (a) _____

(b) Find the value of $\frac{5}{6} \div 10$

Ans: (b) _____

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- 21 The table below show the start time and duration of three movies at a cinema on the same day.

Movie	Starts at	Duration
Movie 1	2:00 pm	2 h 30 min
Movie 2	2:15 pm	2 h 10 min
Movie 3	2:40 pm	1 h 35 min

- (a) What time will Movie 2 end? Express your answer using the 24-hour clock.

Ans: (a) _____

- (b) Which movie will end the latest?

Ans: (b) Movie _____

- 22 Find the value of the following when $y = 4$.

(a) $3y - 2 + 8y$

Ans: (a) _____

(b) $\frac{5y}{2} + y$

Ans: (b) _____

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- 23 (a) Figure A and B are nets of solids.

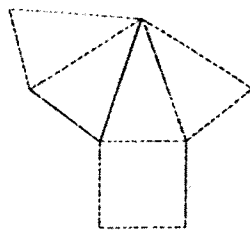


Figure A

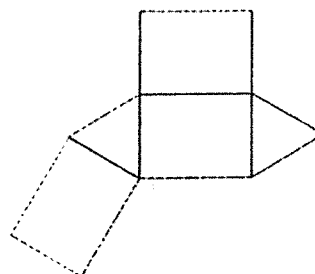
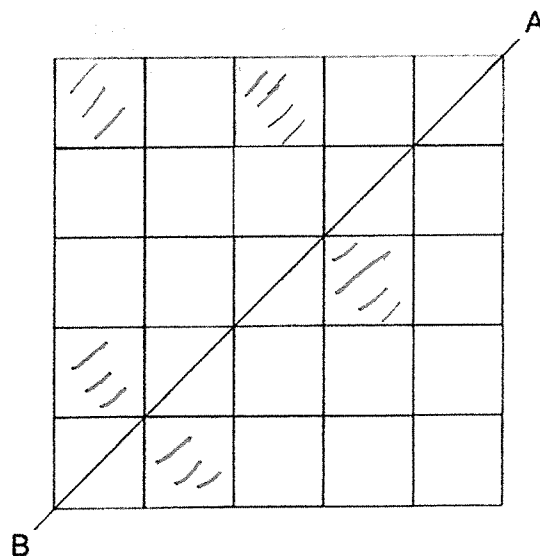


Figure B

Which figure is a net of a pyramid?

Ans: (a) Figure _____

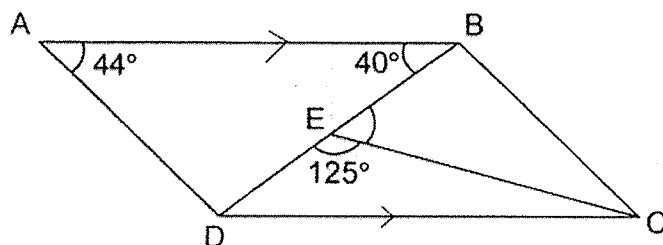
- (b) There are 5 shaded squares in the figure. Shade 3 more squares to form a symmetric figure with AB as the line of symmetry.



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- 24 ABCD is a parallelogram. DEB is a straight line.
 $\angle BAD = 44^\circ$, $\angle ABD = 40^\circ$ and $\angle DEC = 125^\circ$.



Find $\angle BCE$.

Ans: _____°

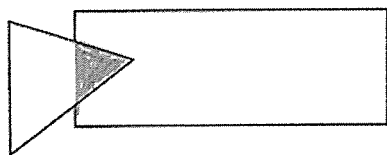
- 25 Cookies are sold in boxes of 12 or 20. Mdm Lee wants to buy exactly 108 cookies. What is the least number of boxes she has to buy?

Ans: _____

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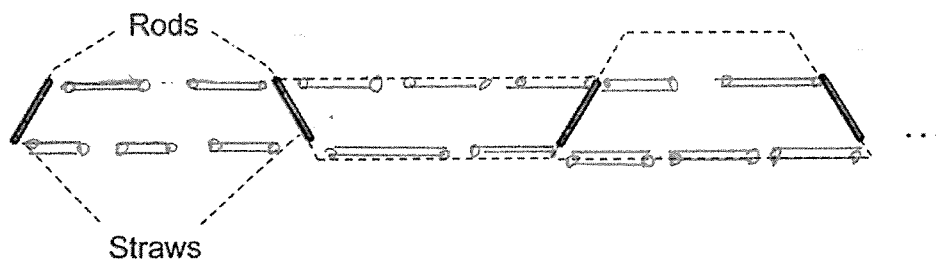
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- 26 The figure below is made up of a triangle and a rectangle. The area of the triangle is $\frac{1}{4}$ of the area of the rectangle. $\frac{1}{4}$ of the triangle is shaded. What is the ratio of the shaded area to the area of the figure?



Ans: _____

- 27 Jean used rods and straws to form a pattern. Part of the pattern is shown in the figure below.



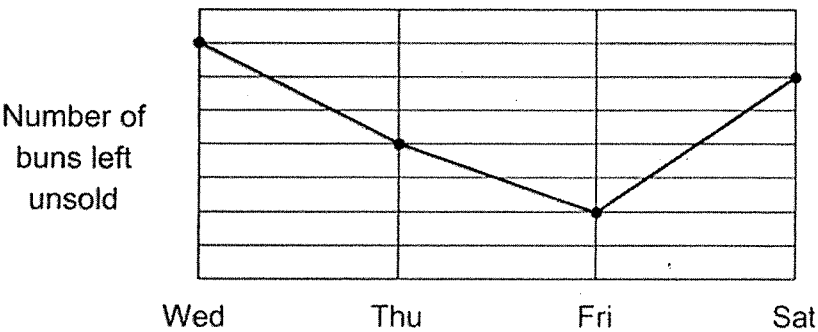
She used a total of 67 rods and straws. How many rods did she use?

Ans: _____

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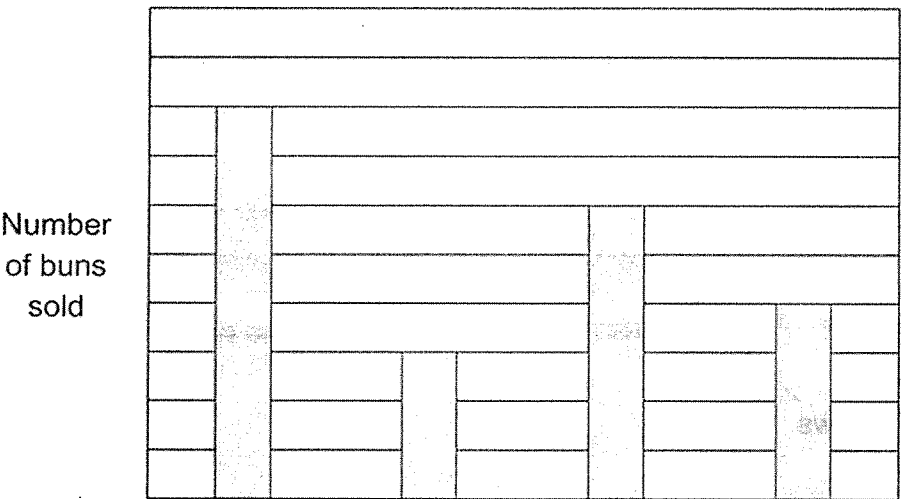
28 A baker baked the same number of buns every day.

The line graph shows the number of buns left unsold at the end of each day from Wednesday to Saturday.



The bar graph shows the number of buns sold each day from Wednesday to Saturday.

Label the graph by writing **W** for Wed, **T** for Thu, **F** for Fri and **S** for Sat.



Ans: _____

Please do not write in the margin



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- 29 Adam painted all the faces of the square block in Figure 1 and cut it into 1 smaller square block A and 4 identical blocks B in Figure 2. The shaded area in Figure 2 is 9 cm^2 . Find the area of square block A that is not painted.

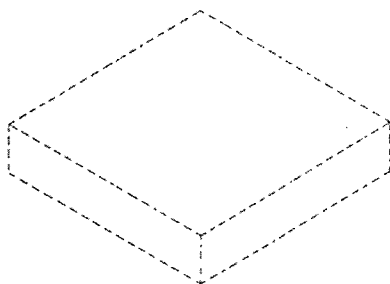


Figure 1

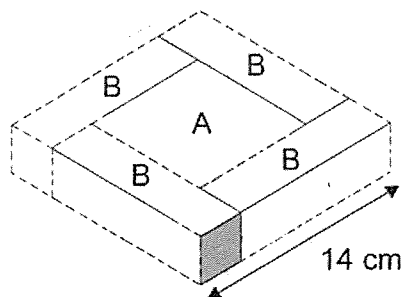
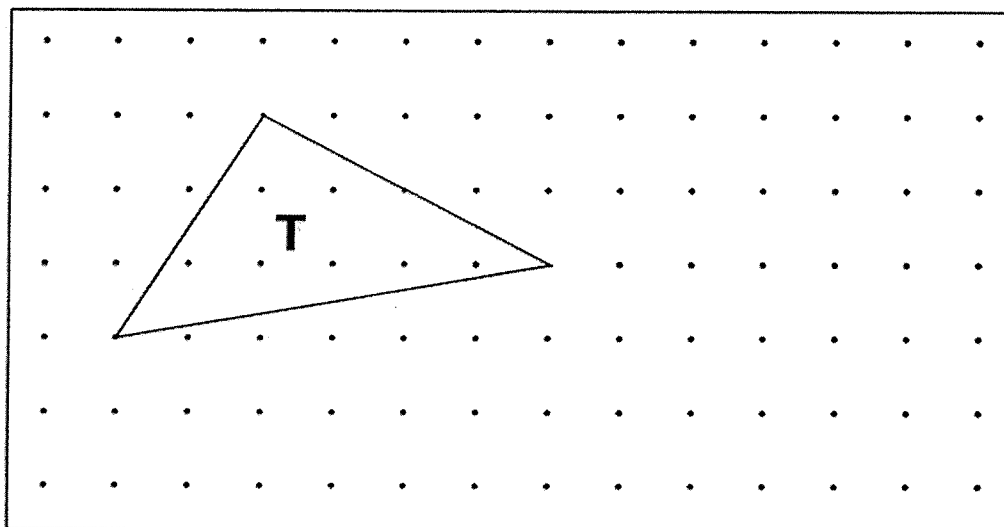


Figure 2

Please do not write in the margin

Ans: _____ cm^2 

- 30 A triangle T is drawn by joining dots on the square grid below with 3 straight lines. Draw a rectangle with the same area as triangle T on the square grid such that it does not overlap with triangle T. Label the rectangle R.



Please do not write in the margin



End of Paper

(Go on to the next page)



NAN HUA PRIMARY SCHOOL
PRELIMINARY EXAMINATION 2026
PRIMARY SIX

MATHEMATICS
PAPER 2

Time: 1 hour 20 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Use dark blue or black ball point pen to write your answers in the space provided for each question.
6. Do not use correction tape/ fluid/ highlighter.
7. The use of calculators is allowed.

Marks Obtained

Section	Maximum Marks	Actual Marks
Paper 2	50	

Name : _____ ()

Form Class : 6 _____

Teaching Group: 6M _____

Date : 20 August 2026

This booklet consists of 15 printed pages and 1 blank page.

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

- 1 Samuel spent $\frac{1}{7}$ of his study time on English. He then spent $\frac{1}{3}$ of the remaining study time on Science. He spent the rest of his study time on Mathematics. What fraction of his study time did Samuel spend on Mathematics? Give your answer in its simplest form.

Ans: _____

- 2 Anqi and Benny had 92 stickers altogether. Anqi and Charul had 50 stickers altogether. The ratio of the number of stickers Benny had to the number of stickers Charul had was 5 : 2. How many stickers did Benny have?

Ans: _____

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- 3 Sheena had 3 pails of sand and each pail contained 1 kg 75 g of sand. She then repacked all the sand into 5 bags. How many kilograms of sand was there in each bag?

Ans: _____ kg

- 4 4 pumpkins had an average mass of 3.25 kg. When a fifth pumpkin was added, the average mass of all 5 pumpkins became 3.04 kg. What was the mass of the fifth pumpkin?

Ans: _____ kg

Please do not write in the margin.



- 5 Bulb A lights up every 6 minutes. Bulb B lights up every 9 minutes. Both bulbs light up together at 09 00. How many times will Bulb A light up without Bulb B lighting up from 09 00 to 09 55?

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Ans: _____



For questions 6 to 15, show your working clearly 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. (40 marks)

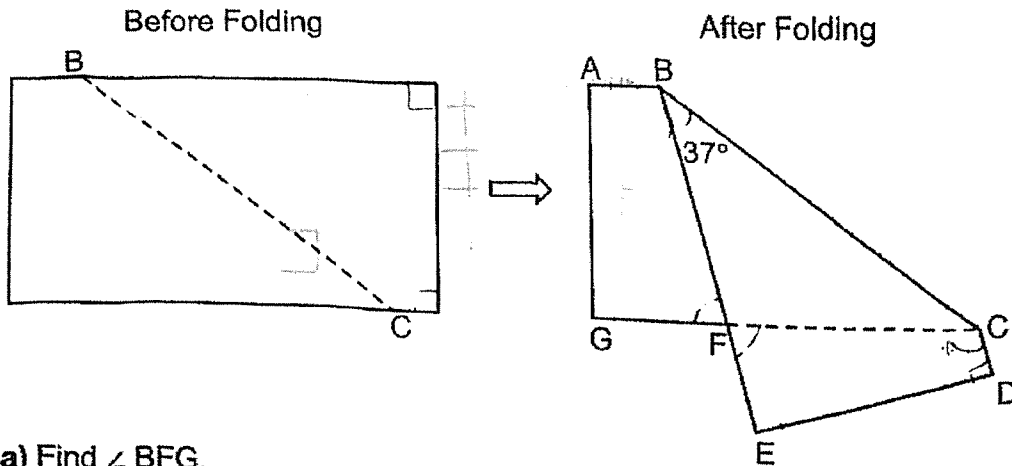
- 6 Firdaus and Melyi had the same amount of money at first. Firdaus bought 1 adult and 2 child tickets. He had \$10 left. Melyi wanted to buy 3 adult and 2 child tickets, but she was short of \$26. A child ticket costs \$10. How much money did Firdaus have at first?

Please do not write in the margin.

Ans: \$ _____ [3]



- 7 A rectangular piece of paper is folded along the dotted line BC as shown.



(a) Find $\angle BFG$.

Ans: (a) _____° [1]

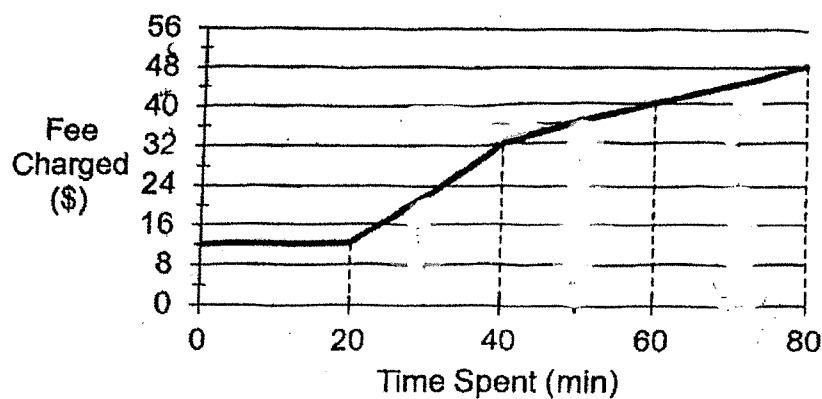
(b) Find $\angle FCD$.

Ans: (b) _____° [2]

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- 8 The graph shows the fee a trampoline park charges based on the time spent by a visitor in the park.



- (a) How much would the trampoline park charge for 10 minutes spent in the park?

Ans: (a) \$ _____ [1]

- (b) Sarah paid \$40 during her visit. How long did she spend at the trampoline park?

Ans: (b) _____ h [1]

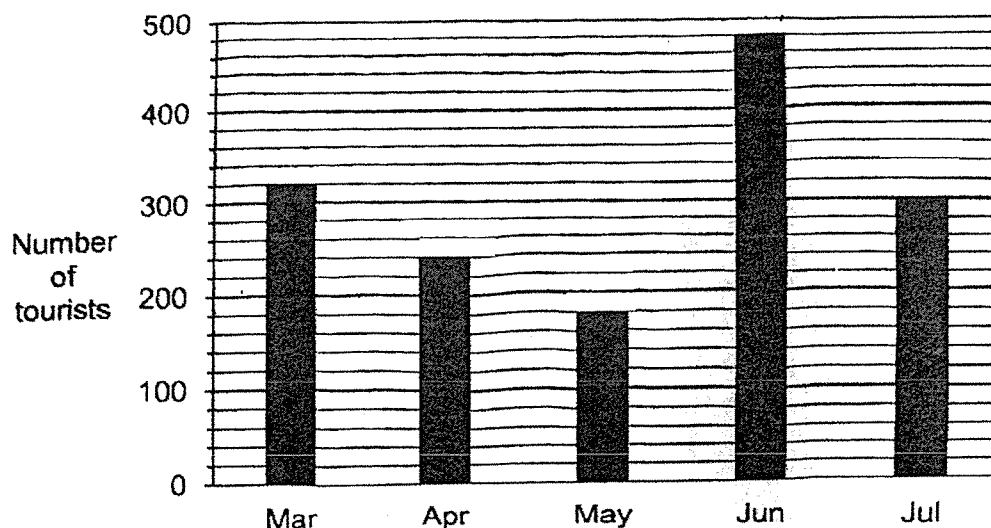
- (c) Afiq and Wei Teng spent 80 minutes in the trampoline park altogether. If each of them spent at least 10 minutes in the park, what is the smallest amount of fee they paid in total?

Ans: (c) \$ _____ [2]

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- 9 The bar graph shows the number of tourists visiting Gardenia Land from March to July.



- (a) What is the average number of tourists visiting Gardenia Land from March to June?

Ans: (a) _____ [1]

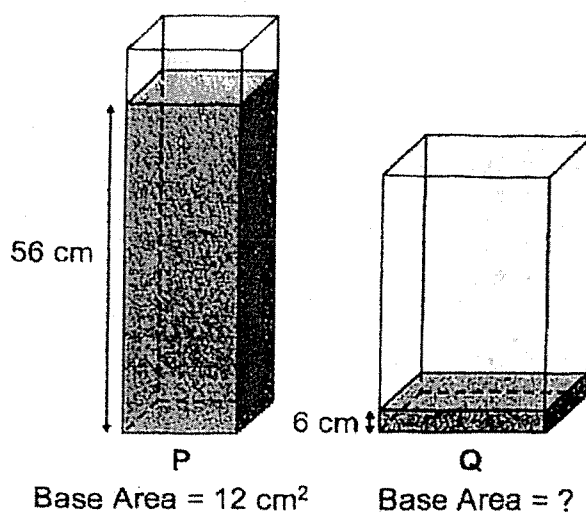
- (b) What is the percentage decrease in the number of tourists visiting Gardenia Land from June to July?

Ans: (b) _____ % [2]

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- 10 The figure shows the amount of water in two rectangular containers, P and Q, at first. The amount of water in Container P was 4 times that of the water in Container Q. After some water was poured from Container P into Container Q, the water level in both containers were of the same height.



- (a) Find the base area of Container Q.

Ans: (a) _____ cm^2 [2]

- (b) Find the decrease in water level of Container P.

Ans: (b) _____ cm [2]

Please do not write in the margin.



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- 11 The total cost of a fan and an air purifier before a sale was \$510. During the sale, the fan was sold at a 10% discount and the air purifier at a 7% discount. The amount of discount on each item was the same. What was the total cost of the fan and the air purifier during the sale?

Fan	10%
Air purifier	7%

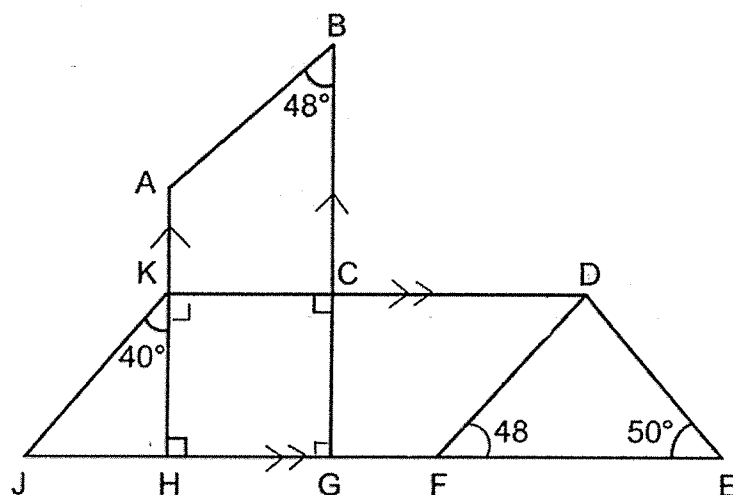
} \$510

Please do not write in the margin.

Ans: \$ _____ [4]



- 12 HABG and HFDK are identical trapeziums. AH is parallel to BG and KD is parallel to HF. JHGF is a straight line.



- (a) Find $\angle GFD$.

Ans: (a) _____° [1]

- (b) The figure above is not drawn to scale. Each of the statements below is either true, false or not possible to tell from the information given. For each statement, put a tick ($\checkmark$) to indicate your answer.

Statement	True	False	Not possible to tell
KCGH is a square.			
JKDF is a parallelogram.			
FDE is an isosceles triangle.			

[3]

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- 13 (a) Figure 1 below is formed by overlapping two identical semicircles. O is the mid-point of AB and AB = 8 cm. Find the shaded area in Figure 1. (Take $\pi = 3.14$)

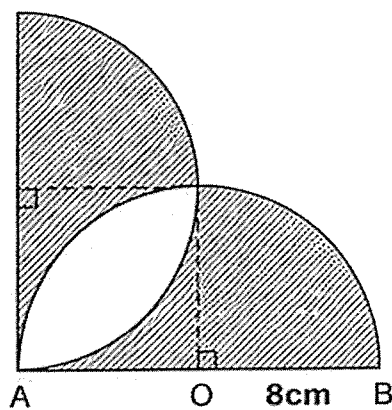


Figure 1

Please do not write in the margin.

Ans: (a) _____ cm² [2]

- (b) Figure 2 below is made up of a large quarter circle, three identical small quarter circles and two identical semicircles. The radius of each small quarter circle is 8 cm. Find the total shaded area in Figure 2. (Take $\pi = 3.14$)

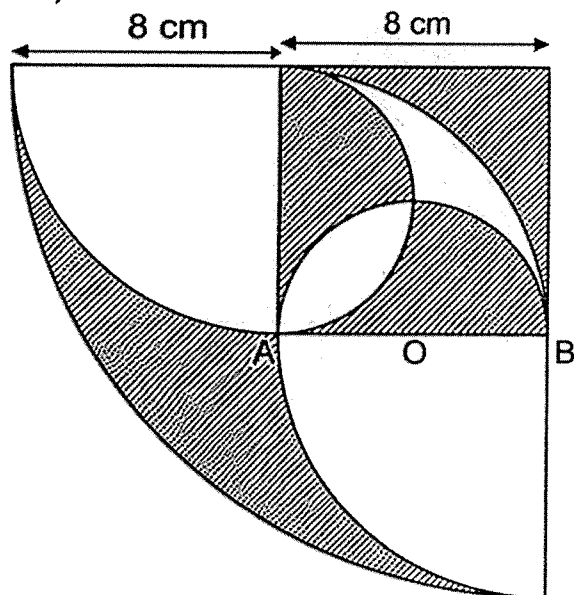


Figure 2

Please do not write in the margin.

Ans: (b) _____ cm² [3]

- 14 Dan spent a total of \$660 to buy some apples and pears. He spent \$300 more on apples than on pears.

(a) Find the amount of money he spent on apples.

Ans: (a) \$ _____ [2]

- (b) He bought 4 times as many apples as pears. Each pear costs 30 cents more than each apple. Find the cost of an apple.

Ans: (b) \$ _____ [3]

Please do not write in the margin.

- 15 Four identical trapeziums are used to form Figure 1. The perimeter of Figure 1 is 144 cm. Trapeziums A and D are overlapped to form Figure 2. The perimeter of the shaded parallelogram in Figure 2 is 54 cm.

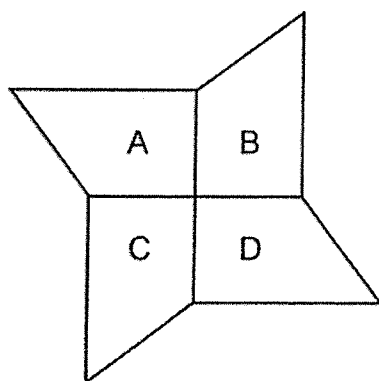


Figure 1

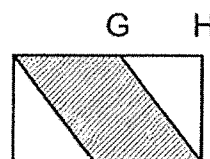
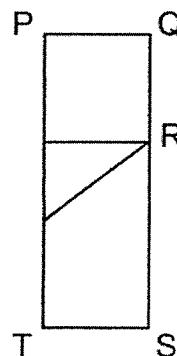


Figure 2

- (a) Find the length of GH.

Ans: (a) _____ cm [2]

- (b) Trapeziums B and C are joined to form rectangle PQST. The length of QR is $\frac{4}{7}$ the length of PU. Find the area of rectangle PQST.



Ans: (b) _____ cm² [3]

End of Paper

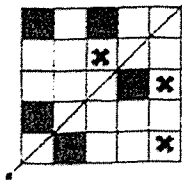
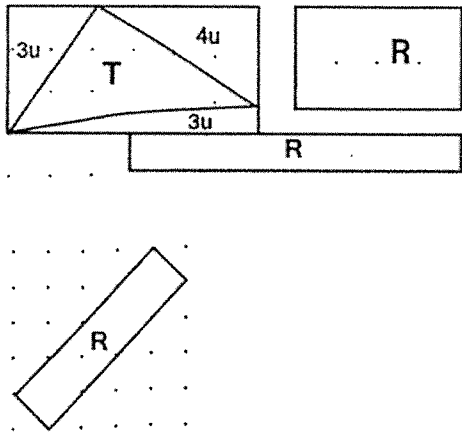
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YEAR : 2026
LEVEL : PRIMARY 6
SCHOOL : NAN HUA PRIMARY SCHOOL
SUBJECT : MATHEMATICS
TERM : PRELIMINARY EXAMINATION

(PAPER 1 — BOOKLET A)

Q1	3	Q2	2	Q3	3	Q4	3	Q5	4
Q6	3	Q7	3	Q8	4	Q9	4	Q10	4
Q11	2	Q12	3	Q13	3	Q14	3	Q15	2
Q16	2	Q17	3	Q18	1				

(PAPER 1 — BOOKLET B)

Q19	(a) $9205 - 48 = 9157$ (b) $160 \times 25 = 4000$	Q25	$3 \times 20 + 4 \times 12 = 108$ $3 + 4 = 7$ boxes
Q20	(a) $\frac{2}{3} - \frac{1}{4} = \frac{5}{12}$ (b) $\frac{5}{6} \div 10 = \frac{1}{12}$	Q26	Triangle : shaded triangle : rectangle $3 : 1 : 16$ Total area = $3 + 16 = 19$ Shaded area : total area = $1 : 19$
Q21	(a) $2:00 \text{ p.m.} + 2 \text{ h } 30 \text{ min} = 16:25$ (b) Movie 1	Q27	$(67 - 7) \div 6 = 10$ $10 + 2 = 12$ rods
Q22	(a) $3(4) - 2 + 8(4) = 42$ (b) $\frac{5(4)}{2} + 4 = 14$	Q28	F, W, T, S
Q23	(a) Figure A (b) 	Q29	$8 \times 3 \times 4 = 96 \text{ cm}^2$
Q24	$180^\circ - 44^\circ - 40^\circ = 96^\circ$ $180^\circ - 125^\circ = 55^\circ$ $180^\circ - 96^\circ - 55^\circ = 29^\circ$	Q30	$18 - 3 - 3 - 4 = 8$ square units 

PAPER 2

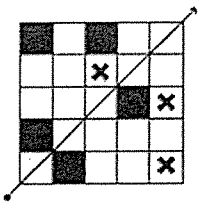
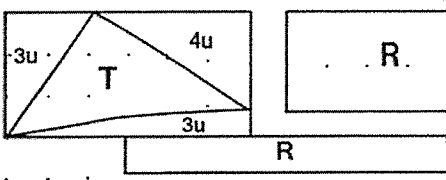
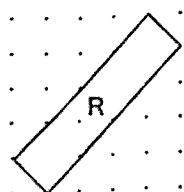
Q1	$1 - \frac{1}{7} = \frac{6}{7}$ $1 - \frac{1}{3} = \frac{2}{3}$ $\frac{2}{3} \times \frac{6}{7} = \frac{4}{7}$ Answer: $\frac{4}{7}$	Q2	$92 - 50 = 42$ $5 - 2 = 3$ $3u = 42$ $u = 14$ $5u = 70$ Answer: 70 stickers
Q3	$1 \text{ kg } 75 \text{ g} = 1.075 \text{ kg}$ $3 \times 1.075 \text{ kg} = 3.225 \text{ kg}$ $3.225 \text{ kg} \div 5 = 0.645 \text{ kg}$ Answer: 0.645 kg	Q4	$4 \times 3.25 \text{ kg} = 13 \text{ kg}$ $5 \times 3.04 \text{ kg} = 15.2 \text{ kg}$ $15.2 \text{ kg} - 13 \text{ kg} = 2.2 \text{ kg}$ Answer: 2.2 kg
Q5	Multiples of 6 from 0 to 55: 0, 6, 12, 18, 24, 30, 36, 42, 48, 54 Not multiples of 9: 6, 12, 24, 30, 42, 48 Answer: 6 multiples	Q6	$2 \text{ adult tickets} = \$10 + \$26 = \36 $1 \text{ adult ticket} = \$36 \div 2 = \$18$ $\$18 + 2 \times \$10 + \$10 = \48 Answer: \$48
Q7	(a) $\angle BFG = 37^\circ + 37^\circ = 74^\circ$ (b) $\angle FCD = 180^\circ - 74^\circ = 106^\circ$	Q8	(a) \$12 (b) 60 min = 1 h (c) $\$12 + \$40 = \$52$
Q9	(a) $320 + 240 + 180 + 480 = 1220$ $1220 \div 4 = 305$ Answer: 305 tourists (b) $480 - 300 = 180$ Percentage decrease = $\frac{180}{480} \times 100\% = 37.5\%$ Answer: 37.5%	Q10	(a) $56 \times 12 = 672 \text{ cm}^3$ $672 \div 4 = 168 \text{ cm}^3$ $168 \div 6 = 28 \text{ cm}^2$ Answer: 28 cm^2 (b) $168 \times 5 = 840 \text{ cm}^3$ $12 + 28 = 40 \text{ cm}^2$ $840 \div 40 = 21 \text{ cm}$ $56 - 21 = 35 \text{ cm}$ Answer: 35 cm
Q11	Air purifier original : discount = 100 : 7 Fan original : discount = 10 : 1 = 70 : 7 $100u + 70u = 170u$ $170u = \$510; u = \3 Sale total = $(93u + 63u) = 156u$ $156 \times \$3 = \468 Answer: \$468	Q12	(a) $\angle GFD = 180^\circ - 48^\circ = 132^\circ$ (b) KCGH is a square — True JKDF is a parallelogram — False FDE is an isosceles triangle — Not possible to tell

Q13	(a) $OB = 8 \div 2 = 4 \text{ cm}$ Shaded area $= 4 \times 4 \times 2 = 32 \text{ cm}^2$ Answer: 32 cm^2 (b) $\frac{1}{4} \times 3.14 \times 16^2 = 200.96 \text{ cm}^2$ $200.96 - \frac{3}{4} \times 3.14 \times 8^2 = 50.24 \text{ cm}^2$ $50.24 + 32 = 82.24 \text{ cm}^2$ Answer: 82.24 cm^2	Q14	(a) $\\$660 + \\$300 = \\$960$ $\\$960 \div 2 = \\480 Answer: $\\$480$ (b) Apples amount $= \\$480$ $\frac{1}{4} \times \\$480 = \\120 $\\$180 - \\$120 = \\$60$ $\\$60 \div \\$0.30 = 200 \text{ pears}$ $\\$180 \div 200 = \\0.90 $\\$0.90 - \\$0.30 = \\$0.60$ Answer: $\\$0.60 \text{ per pear}$
Q15	(a) Long side + slant side $= 144 \div 4 = 36 \text{ cm}$ Short side + slant side $= 54 \div 2 = 27 \text{ cm}$ Long side – short side $= 36 - 27 = 9 \text{ cm}$ Answer: $GH = 9 \text{ cm}$ (b) $7u - 4u = 9 \text{ cm}$ $3u = 9 \text{ cm}; u = 3 \text{ cm}$ $QR = 4u = 12 \text{ cm}$ $PU = 7u = 21 \text{ cm}$ $PT = 12 + 21 = 33 \text{ cm}$ Area of PQST $= 12 \times 33 = 396 \text{ cm}^2$ Answer: 396 cm^2		

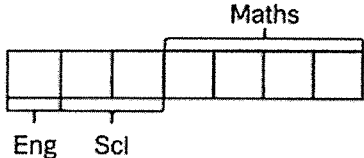
Prelim Answer Keys for students

Name: _____

Paper 1 Booklet B

19	(a) <u>9157</u> (b) <u>4000</u>	25	Using guess and check, $3 \times 20 + 4 \times 12 = 108$ $3 + 4 = 7$
20	(a) $\frac{5}{12}$ (b) $\frac{1}{12}$	26	UT: ST : R $3 : 1 : 16$ Total area: $3 + 16 = 19$ 1:19
21	(a) <u>16 25</u> (b) <u>Movie 1</u>	27	<u>Method 1:</u> $(67 - 7) \div 6 = 10$ $10 + 2 = 12$ <u>Method 2:</u> $(67 - 1) \div 6 = 11$ $11 + 1 = 12$
22	(a) <u>42</u> (b) <u>14</u>	28	F, W, T, S
23	(a) Figure <u>A</u> (b) 	29	$8 \times 3 \times 4 = 96$
24	<u>Method 1</u> $180^\circ - 44^\circ - 40^\circ = 96^\circ$ (EBC) $180^\circ - 125^\circ = 55^\circ$ (BEC) $180^\circ - 96^\circ - 55^\circ = 29^\circ$ <u>Method 2</u> $180^\circ - 125^\circ - 40^\circ = 15^\circ$ (ECD) $44^\circ - 15^\circ = 29^\circ$	30	$18 - 3 - 3 - 4 = 8$  

Paper 2

1.	<u>Method 1</u> $1 - \frac{1}{7} = \frac{6}{7}$ $1 - \frac{1}{3} = \frac{2}{3}$ $\frac{2}{3} \times \frac{6}{7} = \frac{4}{7}$ <u>Method 2</u> $\frac{1}{3} = \frac{2}{6}$  Ans: $\frac{4}{7}$	6.	<u>Method 1</u> $2 \text{ adults} = \$10 + \26 $= \$36$ $1 \text{ adult} = \$36 \div 2$ $= \$18$ $\text{Amt of money} = \$18 + 2 \times \$10 + \$10$ $= \$48$ <u>Method 2</u> $2 \text{ adults} = \$10 + \26 $= \$36$ $1 \text{ adult} = \$36 \div 2$ $= \$18$ $\text{Amt of money} = \$18 \times 3 + 2 \times \$10 - \$26$ $= \$48$
2.	$92 - 50 = 42$ $5 - 2 = 3$ $3u = 42$ $1u = 42 \div 3$ $= 14$ $5u = 14 \times 5$ $= 70$	7.	(a) $\angle BFG = 37 + 37$ $= \underline{74^\circ}$ (b) $\angle FCD = 180 - 74$ $= \underline{106^\circ}$
3.	$1 \text{ kg } 75 \text{ g} = 1.075 \text{ kg}$ $3 \times 1.075 \text{ kg} = 3.225 \text{ kg}$ $3.225 \text{ kg} + 5 = \mathbf{0.645 \text{ kg}}$	8.	(a) \$12 (b) 60 min = 1h (c) Smallest amount fee occurs when they spend 20min and 60min respectively. $\$12 + \$40 = \$52$
4.	$4 \times 3.25 \text{ kg} = 13 \text{ kg}$ $5 \times 3.04 \text{ kg} = 15.2 \text{ kg}$ $15.2 \text{ kg} - 13 \text{ kg} = \mathbf{2.2 \text{ kg}}$	9.	(a) $320 + 240 + 180 + 480 = 1220$ $1220 \div 4 = \underline{305}$ (b) $480 - 300 = 180$ $\frac{180}{480} \text{ (or taking } 180 \div 480)$

5.	From 0 to 55, look for multiples of 6 that are not multiples of 9. 0, 6, 12, 18, 24, 30, 36, 42, 48, 54 Ans : 6	10	(a) $56 \times 12 = 672$ $672 + 4 = 168$ $168 + 6 = 28 \text{ cm}^2$ (b) $168 \times 5 = 840$ $12 + 28 = 40$ $840 + 40 = 21$ $56 - 21 = 35 \text{ cm}$
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11	AP (Original) : AP Discount 100 7 Fan (Original) : Fan Discount 10 1 70 7 $100 + 70 = 170$ $1u = \$510 \div 170$ $= \$3$ $170u - 7u - 7u = 156u$ $156u = \$3 \times 156$ $= \$468$	12	a) $\angle GFD = 180 - 48$ $= 132^\circ$ b) True False Not Possible to tell (1 mark for each answer)
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13	a) Method 1 $OB = 8 \div 2$ $= 4$ Shaded Part = $4 \times 4 \times 2$ $= 32 \text{ cm}^2$ Method 2 Shaded Part = $\frac{1}{2} \times 8 \times 8$ $= 32 \text{ cm}^2$	13	b) Method 1 (Finding shaded directly) $\frac{1}{4} \times \pi \times 16^2$ $= 200.96$ $200.96 - \frac{3}{4} \times \pi \times 8^2 = 50.24$ $50.24 + 32 = 82.24$ Method 2 (Finding unshaded first) $\frac{1}{4} \times \pi \times 16^2 = 200.96$ $\frac{1}{4} \times \pi \times 8^2 - 16 \times 2 = 16$ $200.96 - 16 = 184.96$ $184.96 \div 2 = 92.48$
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Prelim Answer Keys for students

			$\frac{1}{4} \times \pi \times 8^2 = 16\pi = 50.24$ $18.24 + 50.24 + 50.24 = 118.72$ $200.96 - 118.72 = \underline{82.24}$
14	a) <u>Method 1</u> $\$660 + \$300 = \$960$ $\$960 \div 2 = \underline{\$480}$ <u>Method 2</u> $\$660 - \$300 = \$360$ $\$360 \div 2 = \180 $\$180 + \$300 = \underline{\$480}$	14	b) Apples Amt = \$480 $\frac{1}{4} \times \text{Apples Amt} = \frac{1}{4} \times \480 $= \$120$ $\$180 - \$120 = \$60$ $\$60 + \$0.30 = 200 \text{ (no. of pears)}$ $\$180 \div 200 = \0.90 $\$0.90 - \$0.30 = \underline{\$0.60}$
15	a) $1 \text{ Long} + 1 \text{ Slant} = 144 + 4 = 36$ $1 \text{ Short} + 1 \text{ Slant} = 54 \div 2 = 27$ $\text{Long} - \text{Short} = 36 - 27 = 9$ $\text{GH} = \underline{9} \text{ cm}$		b) From Figure 1, observe that short length = side length $7u - 4u = 3u = 9$ $1u = 9 \div 3$ $= 3$ $\text{QR} = 4u = 12 \text{ cm}$ $\text{PU} = 7u = 21 \text{ cm}$ $\text{PT} = 12 + 21 = 33 \text{ cm}$ $\text{PQ} = \text{QR} = 12 \text{ cm}$ $\text{Area of PQST} = 12 \times 33$ $= \underline{396 \text{ cm}^2}$