



MARIS STELLA HIGH SCHOOL (PRIMARY)

SEMESTRAL ASSESSMENT 1

PRIMARY 6 MATHEMATICS

14 MAY 2019

PAPER 1

(BOOKLET A)

15 questions (20 marks)

Total Time for Booklets A and B: 8.15 – 9.15 a.m. (1 hour)

NAME : \_\_\_\_\_ (     )

CLASS : PRIMARY 6 \_\_\_\_\_

INSTRUCTIONS TO CANDIDATES

1. DO NOT OPEN THIS BOOKLET 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. YOU ARE NOT ALLOWED TO USE A CALCULATOR.



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. (20 marks)

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1. In 875 342, which digit is in the ten thousands place?

- (1) 8
- (2) 7
- (3) 5
- (4) 4

2. Round off 20.171 to the nearest tenth.

- (1) 20
- (2) 20.1
- (3) 20.2
- (4) 20.17

3.  $\frac{4}{6} = \frac{6}{\square}$

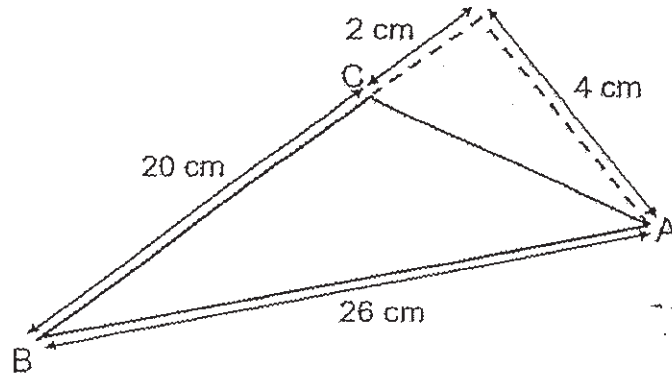
What is the missing number in the box?

- (1) 12
- (2) 9
- (3) 8
- (4) 4

4. Express 16 m 5 cm in cm

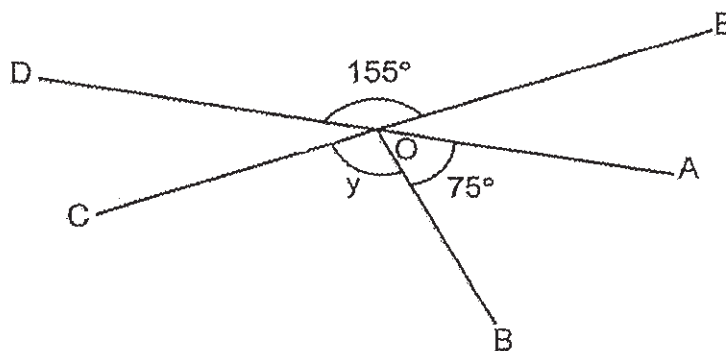
- (1) 165 cm
- (2) 1605 cm
- (3) 1650 cm
- (4) 16 005 cm

5. Find the area of the triangle ABC.



- (1)  $40 \text{ cm}^2$   
 (2)  $44 \text{ cm}^2$   
 (3)  $80 \text{ cm}^2$   
 (4)  $88 \text{ cm}^2$

6. AOD and COE are straight lines. Find  $\angle y$  in the figure shown.



- (1)  $105^\circ$   
 (2)  $100^\circ$   
 (3)  $80^\circ$   
 (4)  $25^\circ$

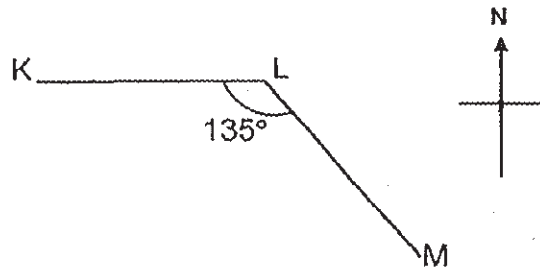
7. How many of the letters below have both parallel and perpendicular lines in it?



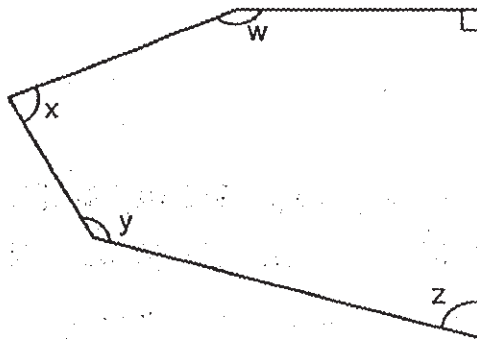
- (1) 1
- (2) 2
- (3) 3
- (4) 4

8. K, L and M are three points on the ground. Point K is west of Point L and  $\angle KLM$  is  $135^\circ$ . In which direction is point L from point M?

- (1) North-West
- (2) North-East
- (3) South-West
- (4) South-East

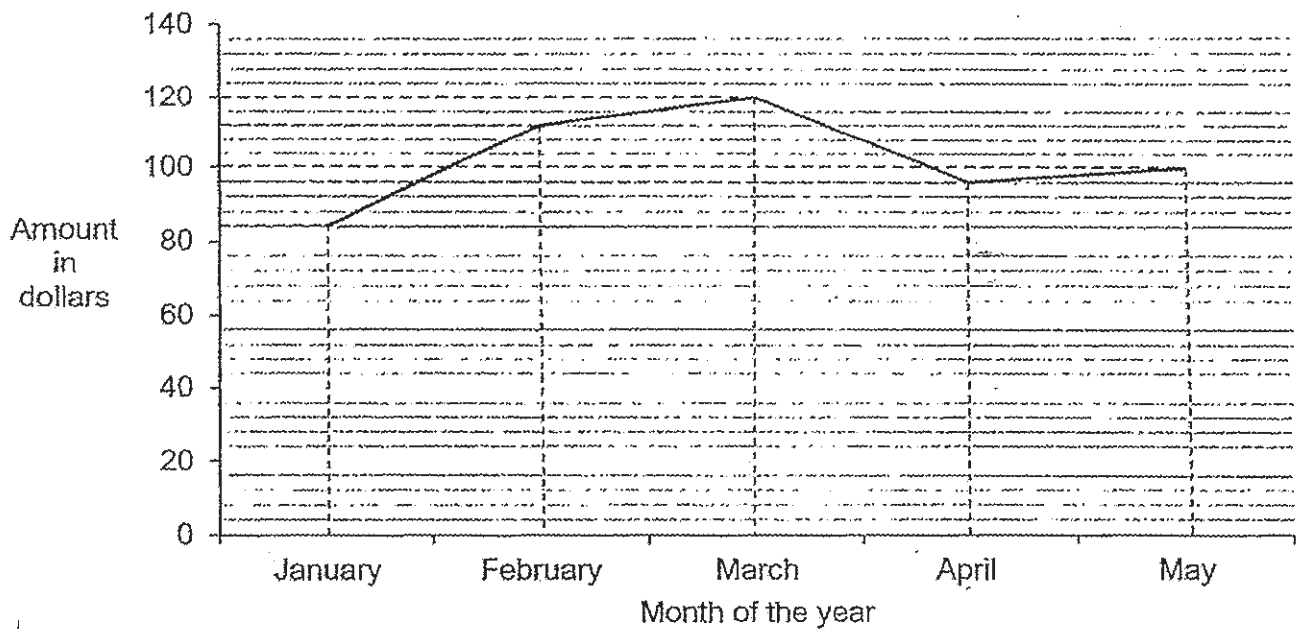


9. What is the sum of  $\angle w$ ,  $x$ ,  $y$  and  $z$ ?



- (1)  $360^\circ$
- (2)  $450^\circ$
- (3)  $540^\circ$
- (4)  $630^\circ$

Study the line graph carefully. The graph shows Annie's monthly handphone bill. Answer questions 10 and 11 based on the graph.



10. What was the total amount paid over the 5 months?

- (1) \$410
- (2) \$488
- (3) \$508
- (4) \$510

11. Which month's bill is  $\frac{5}{6}$  that of March's?

- (1) January
- (2) February
- (3) April
- (4) May

12. Jason had 12 packets of sweets. Each packet contains  $x$  sweets. He gave 2 packets to his sister and ate 4 sweets. He then divided the remaining sweets among 5 friends. How many sweets did each friend get?

(1)  $\frac{10x - 4}{5}$

(2)  $\frac{12x - 4}{5}$

(3)  $\frac{12x - 6}{5}$

(4)  $\frac{6x}{5}$

13. Lala and Mina made some bracelets over two days. On Saturday, Lala made 19 more bracelets than Mina. On Sunday, Lala made another 20 bracelets and Mina made another 15 bracelets. At the end of the two days, Lala made  $\frac{3}{5}$  of the total number of bracelets made. How many bracelets did Mina make?

(1) 24

(2) 26

(3) 48

(4) 78

14. Jenny had some 50¢ and 20¢ coins. The total value of the coins is \$7.70. There are three times as many 20¢ coins as 50¢ coins. How many coins are there?

(1) 11

(2) 14

(3) 22

(4) 28

15. The ratio of Mr Lim's eggs to that of Mr Tan's eggs is 3 : 2. After Mr Lim sold 42 eggs, the number of Mr Lim's eggs is  $\frac{4}{5}$  that of Mr Tan's eggs. How many eggs did Mr Lim have at first?

- (1) 48
- (2) 54
- (3) 60
- (4) 90

End of Booklet A  
Go on to Booklet B





MARIS STELLA HIGH SCHOOL (PRIMARY)  
SEMESTRAL ASSESSMENT 1  
PRIMARY 6 MATHEMATICS  
14 MAY 2019

PAPER 1  
(BOOKLET B)

15 questions (25 marks)

Total Time for Booklets A and B: 8.15 – 9.15 a.m. (1 hour)

NAME : \_\_\_\_\_ ( )

CLASS : PRIMARY 6 \_\_\_\_\_

INSTRUCTIONS TO CANDIDATES

1. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. FOLLOW ALL INSTRUCTIONS CAREFULLY.
3. ANSWER ALL QUESTIONS.
4. WRITE YOUR ANSWERS IN THIS BOOKLET.
5. YOU ARE NOT ALLOWED TO USE A CALCULATOR.

MARKS OBTAINED FOR		
PAPER 1 (BOOKLET A)	/ 20	Parent's Signature: _____
PAPER 1 (BOOKLET B)	/ 25	
TOTAL	/ 45	Date: _____

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. (5 marks)

Do not write in this space.

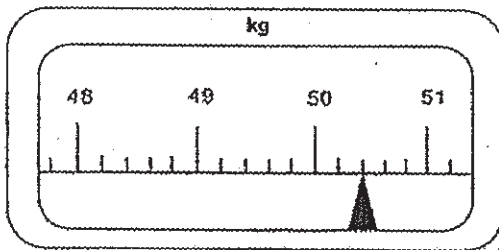
16. What is  $20 + (12 \div 4) \times 3 - 2$ ?

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

17. Find the value of  $12.8 - 4.07$ .

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

18. What is the mass shown on the weighing scale below?



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

19. The length of Rope A is 9 m. The total length of Rope B and C is also 9 m. What is the average length of the 3 ropes?

Do not write in this space.

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

20. Ali mixed cordial and water in the ratio 3 : 7 to get fruit punch. There was 20 ℓ of fruit punch. How much water did he use?

Answer : \_\_\_\_\_ ℓ

Questions 21 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 (20 marks)

Do not write in this space.

21. The table below shows the charges for bicycle rental at a park.

First 2 hours	\$2.50 per hour
Every subsequent $\frac{1}{2}$ hour or part thereof	\$1 per $\frac{1}{2}$ hour

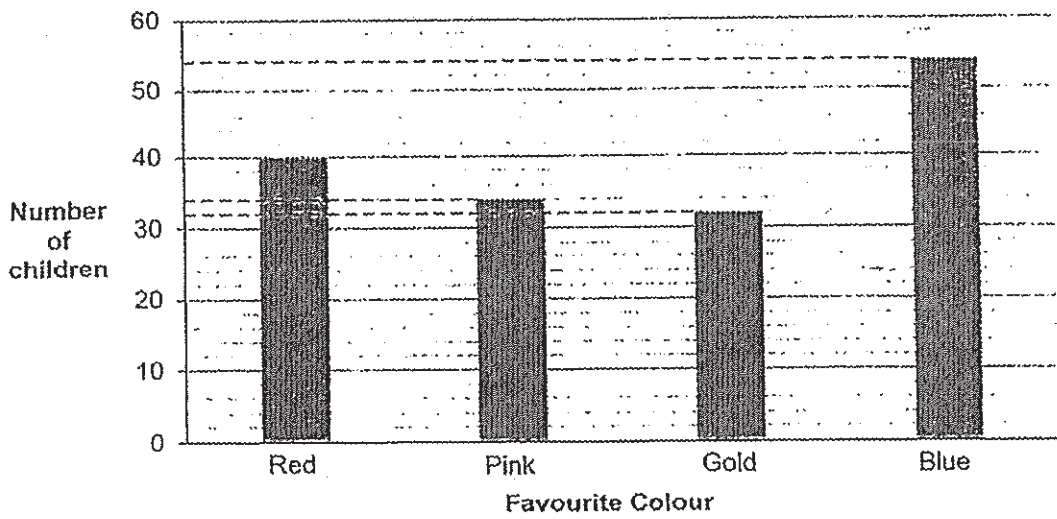
Syam rented a bicycle last Saturday from 8.30 a.m. to 11.05 a.m. How much did she pay in total?

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

22. Jane bought ribbon at \$2.50 per metre. She cut it into smaller pieces, each measuring 20 cm. She sold each piece for \$1.60. How much will she earn from selling 1 m of ribbon?

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

23. The graph below shows the favourite colour of 160 students.



Do not write in this space.

Which two colours makes up 45% of the children's favourite colours?

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

\_\_\_\_\_

24. Liza had a full bottle of apple juice. She drank an equal amount of apple juice each day. At the end of Day 4, she had  $\frac{1}{2}$  of the bottle left. At the end of Day 6, there was 250 ml of juice left. What was the amount of apple juice in the bottle at first?

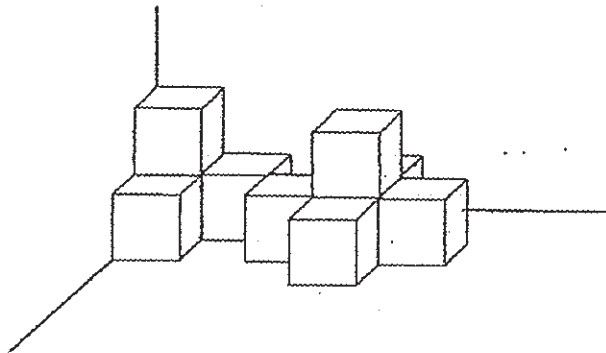
Answer : \_\_\_\_\_ ml

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25. The ratio of the number of pencils Amutha has to what Ben has is 4 : 5. The ratio of the number of pencils Amutha has to what Cindy has is 1 : 2. Find the ratio of the number of pencils Amutha has to the total number of pencils Ben and Cindy have.

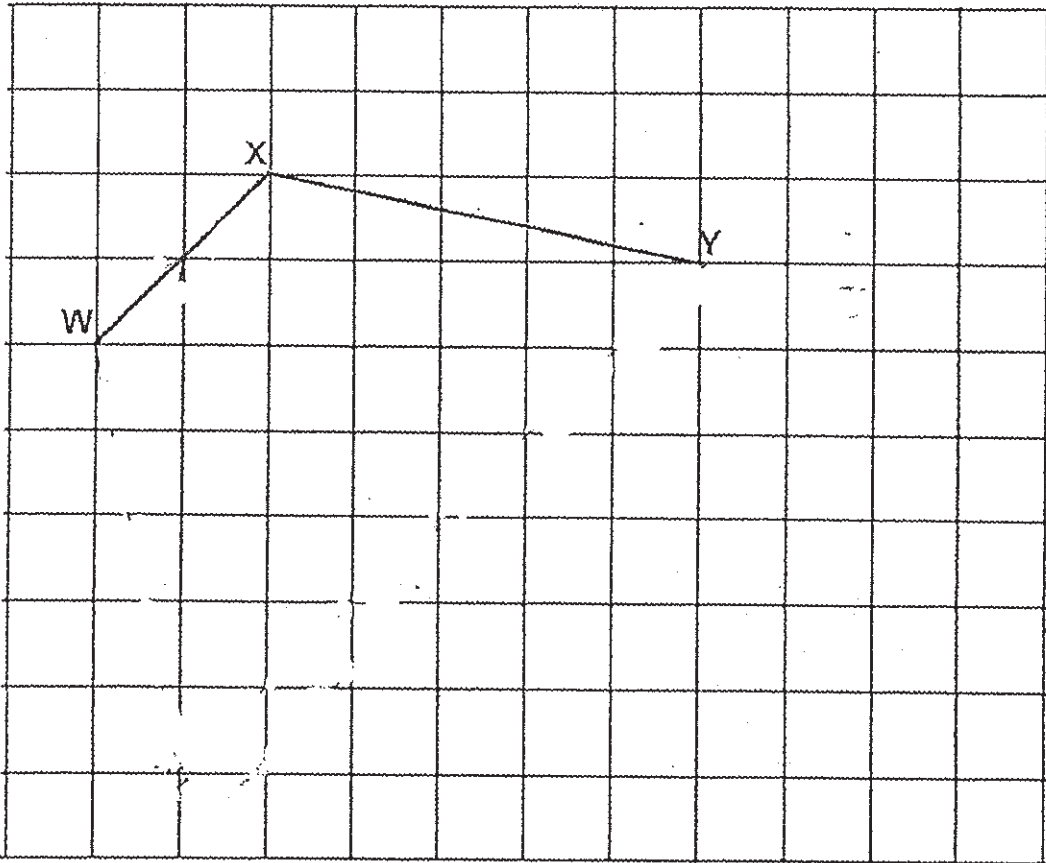
Answer : \_\_\_\_\_

26. Identical cubes of edge 2 cm are glued together to form the solid below. Find the total volume of the solid.



Answer : \_\_\_\_\_ cm<sup>3</sup>

27. (a) On the figure below, complete the trapezium such that  $YZ$  is parallel to  $WX$  and is three times the length of  $WX$ .

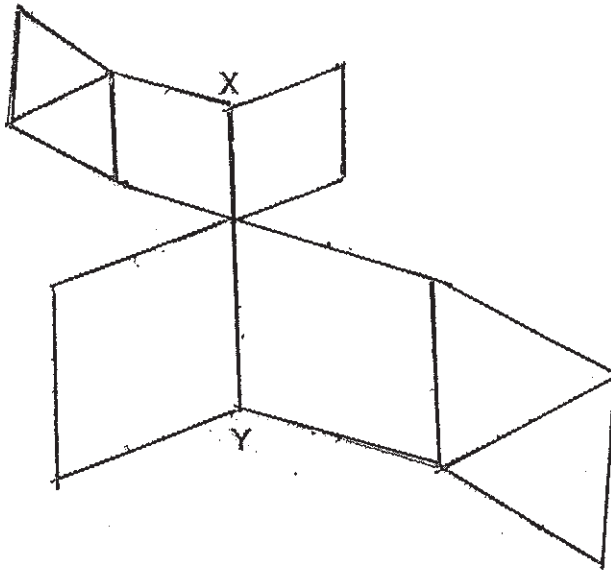


Do not write in this space.

- (b) Measure and write down the size of  $\angle WZY$ .

Answer : (b) \_\_\_\_\_°

28. The figure below is formed using 4 rhombuses and 4 equilateral triangles.  $XY$  is a straight line measuring 9 cm. Find the perimeter of the figure.



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

29. In November, Gerald spent \$800 of his salary and saved the rest. In December, he decreased his spending by \$200 and his savings was increased by 20%. What was his salary?

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



30. A table with 4 columns are filled with numbers in a certain pattern. The first four rows of the table are shown below.

Column	A	B	C	D
Row 1	4	3	2	1
Row 2	5	6	7	8
Row 3	12	11	10	9
Row 4	13	14	15	16

In which row and column will the number 83 appear?

Answer : Row \_\_\_\_\_ Column \_\_\_\_\_

Do not  
write in  
this  
space.

End of Booklet B

14

SCORE  
(Go on to the next page)





MARIS STELLA HIGH SCHOOL (PRIMARY)

SEMESTRAL ASSESSMENT 1

PRIMARY 6 MATHEMATICS

14 MAY 2019

PAPER 2

17 questions (55 mark)

Time: 11.00 a.m. – 12.30 p.m. (1 h 30 min)

NAME : \_\_\_\_\_ (      )

CLASS : PRIMARY 6 \_\_\_\_\_

**INSTRUCTIONS TO CANDIDATES**

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2. FOLLOW ALL INSTRUCTIONS CAREFULLY.
3. ANSWER ALL QUESTIONS.
4. SHOW YOUR WORKINGS CLEARLY AS MARKS ARE AWARDED FOR CORRECT WORKING.
5. WRITE YOUR ANSWERS IN THIS BOOKLET.
6. YOU ARE **ALLOWED** TO USE A CALCULATOR.

MARKS OBTAINED FOR		
PAPER 1 (BOOKLET A & B)	/ 45	Parent's Signature: _____  Date: _____
PAPER 2	/ 55	
TOTAL	/100	



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. (10 marks)

Do not write in this space.

1. A total of 123 people stood in a queue to go to a funfair. There are 4 women between 2 men. What is the largest possible number of women in that queue?

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

2. The table below shows the number of muffins sold by a bakery from Monday to Friday.

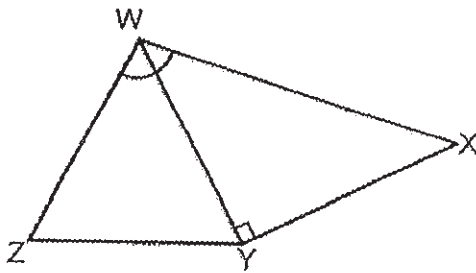
Size	Monday	Tuesday	Wednesday	Thursday	Friday
Number of muffins sold	450	?	350	225	300

- (a) The average number of muffins sold was 300. Find the number of muffins sold on Tuesday.  
(b) What was the percentage increase in number of muffins sold from Thursday to Friday?

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

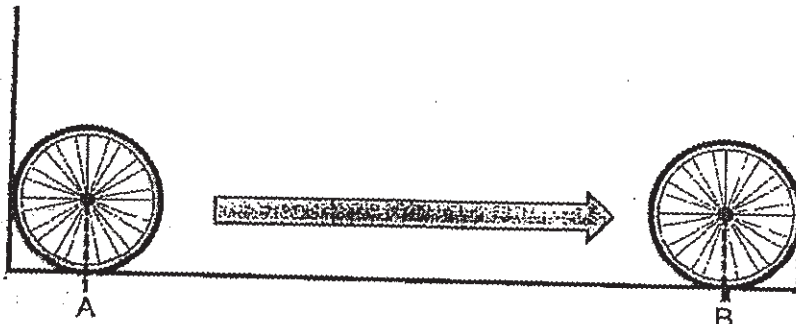
(b) \_\_\_\_\_ [1]

3. The figure below is made up of an equilateral triangle  $WZY$  and an isosceles right-angled triangle  $WXY$ . Find  $\angle ZWX$ .



Answer : \_\_\_\_\_ °

4. A wheel is leaned against the wall. It makes 5 complete revolutions starting from point A and stops at point B when it touches the wall on the other side. The radius of the wheel is 7 cm. Find the distance between the two walls. Leave your answer in  $\pi$ .



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

Do not write in this space.

5. When Rahim increases his number of erasers by 50% and Nathan decreases his number of erasers by half, both of them have the same number of erasers. Rahim had  $2y$  erasers at first.

Do not write in this space.

Each of the statements is true, false or not possible to tell from the information given above. For each statement, put a tick ( $\checkmark$ ) in the correct column.

	True	False	Not possible to tell
Nathan has more erasers than Rahim at first.			
If Rahim increased his number of erasers by 3 times, he will have the same number of erasers as Nathan at first.			
Both boys had a total of $9y$ erasers at first.			

For Questions 6 to 17, show your working clearly and write your answer in the spaces provided. The number of marks available is shown in the brackets [ ] at the end of each question or part-question.

(45 marks)

Do not write in this space.

6. Bart had \$635 and Ernie had \$403. After they shared the cost of a present equally, Ernie had  $\frac{3}{5}$  the amount of money Bart had. How much did each of them pay for the present?

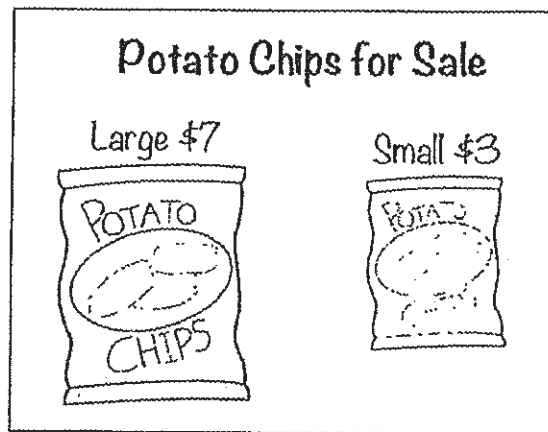
Answer: \_\_\_\_\_ [3]

7. Nora has a number of 10¢, 20¢ and 50¢ coins in the ratio of 5 : 3 : 1. The total value of all the coins is \$168. What is the total value of the 20¢ coins?

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



8. Mr Tan sold 428 packets of potato chips at the prices shown below and collected \$1824. How many large packets of potato chips did he sell?



Do not write in this space.

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



9. Malisa bought 10 l of orange juice. She then poured some orange juice into 6 bottles to its brim. Each bottle can contain  $\frac{3}{4}$  l of orange juice. Next, she poured the remaining amount of orange juice into glasses with a capacity of  $\frac{3}{5}$  l each.

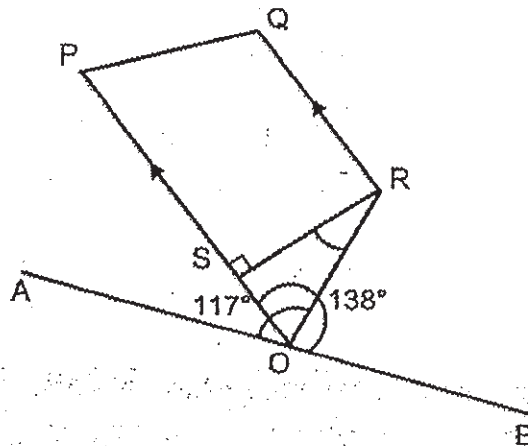
Do not write in this space.

- (a) What was the volume of orange juice to be poured into the glasses?  
Leave your answer in litres.
- (b) After filling as many glasses fully with the remaining orange juice, what was the amount of orange juice left? Leave your answer in litres.

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

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

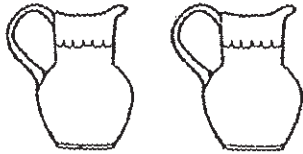

10. OPQR is a trapezium and ORS is a right-angled triangle. AOB is a straight line.  $\angle AOR$  is  $117^\circ$  and  $\angle BOP$  is  $138^\circ$ . Find  $\angle ORS$ .



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



11. Elly bought jugs at the prices shown below.

Large jugs	Small jugs
 <b>2 for \$25</b>	 <b>3 for \$44</b>

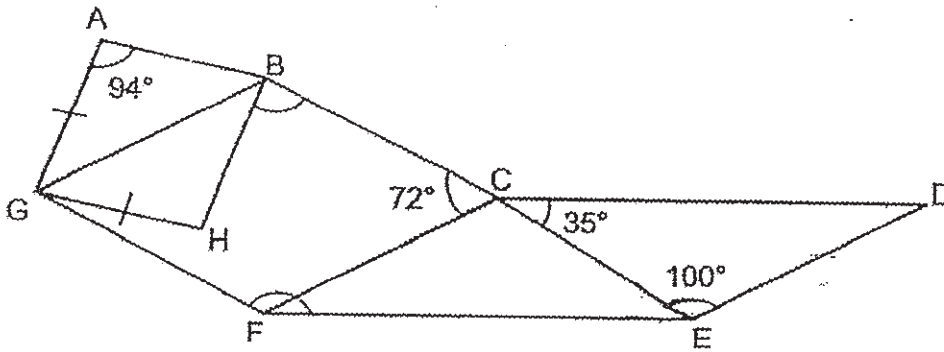
She bought an equal number of large and small jugs. She spent \$65 more on the small jugs than the large jugs. How many jugs did she buy altogether?

Do not write in this space.

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

12. The figure below is made up of parallelogram CDEF and 2 different rhombuses, ABHG and BCFG.  $\angle DEC = 100^\circ$ ,  $\angle DCE = 35^\circ$ ,  $\angle FCB = 72^\circ$  and  $\angle BAG = 94^\circ$ .

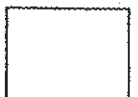
Do not write in this space.



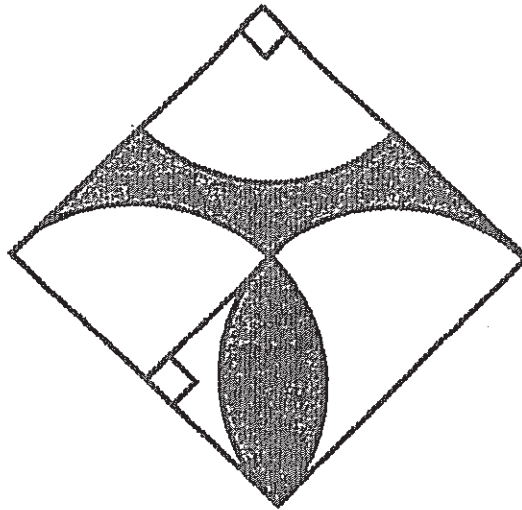
- (a) Find  $\angle GFE$ .  
 (b) Find  $\angle CBH$ .

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

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



13. The figure below is made up of 2 overlapping semicircles and a quadrant in a square of sides 24 cm. Find the total area of the parts that are shaded.  
Take  $\pi = 3.14$



Do not write in this space.

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



14. The ratio of Jo's money to Lina's money is 8 : 5. Lina spent \$180 on a wallet while Jo spent twice as much money on a pair of shoes. The ratio of Jo's money to Lina's money then became 4 : 5.

(a) How much did both girls have in total at first?

(b) How much did Lina have in the end?

Do not write in this space.

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

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

15. Shop A sold a handphone at \$680. This price was 20% lower than the price which Shop B was selling a similar handphone for.

(a) What was the price of the handphone in Shop B?

(b) During a sale, both shops offered a same percentage discount on the handphone. Joyce bought the handphone from Shop A and paid \$129.20 less than the discounted price in Shop B.

What was the percentage discount given by both shops?

Do not write in this space.

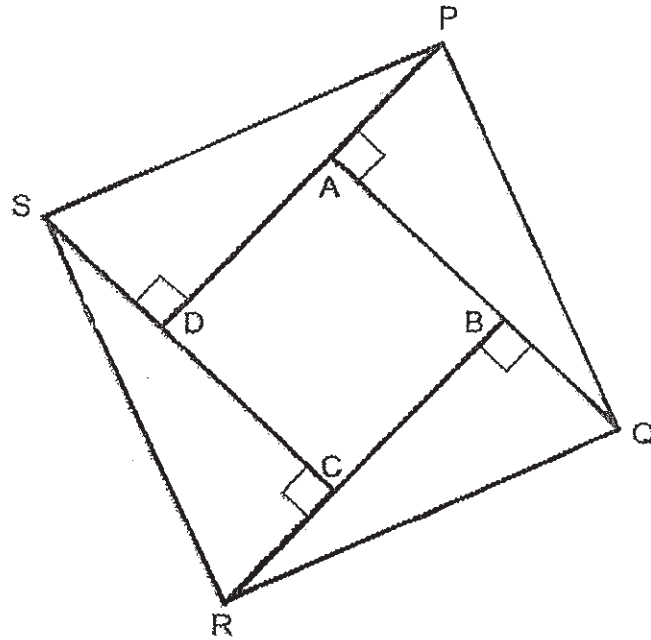
Answer: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [3]



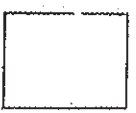
16. Four identical right-angled triangles are arranged to form a square PQRS as shown below. The total area of the parts that are shaded is  $1056 \text{ m}^2$ . The length of PA and AQ are in the ratio 3 : 11.

- (a) Find the area of the square ABCD.
- (b) Find the length of RQ. Give your answer correct to 1 decimal place.



Do not write in this space.

Answer: (a) \_\_\_\_\_ [3]  
 (b) \_\_\_\_\_ [2]





17. Andy, Bala and Charlie baked some cookies. Andy baked  $\frac{1}{4}$  of the cookies. Bala and Charlie baked the remaining cookies in the ratio 1 : 5. Charlie baked 75 more cookies than Andy.

Do not write in this space.

(a) How many cookies were baked altogether?

(b) The three boys baked the cookies over 5 days, from Monday to Friday. They baked 5 more cookies than the previous day. How many cookies did they bake on Monday?

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

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

**End of Paper 2**

13

SCORE  
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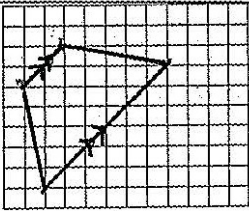
# ANSWER KEY

YEAR : 2019  
 LEVEL : PRIMARY 6  
 SCHOOL : MARIS STELLA  
 SUBJECT : MATHEMATICS  
 TERM : SA1

## SECTION A

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

## SECTION B

Q16	27
Q17	8.73
Q18	50.4
Q19	6
Q20	14L
Q21	Total rent time → 2 h 35 min $2.50 + 2.50 + 1 + 1 = \$7.00$
Q22	$5 \times 1.60 = \$8.00$ $\$8.00 - \$2.50 = \$5.50$
Q23	Total → Red (40) Pink (34) Gold (32) Blue (54) Total → 160 $\frac{45}{100} \times 160 = 72$ Answer : Red and Gold
Q24	$6 \text{ days} = \frac{1}{8} \times \frac{6}{1} = \frac{3}{4}$ $\frac{1}{4} \text{ bottle} = 250\text{ml}$ $\frac{3}{4} \text{ bottle} = 250 \times 3 = 750\text{ml}$
Q25	A : B : C → 4 : 5 : 8 A : B + C → 4 : 13
Q26	$2 \times 2 \times 2 = 8\text{cm}^3$ $8 \times 10 = 80\text{cm}^3$
Q27	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>a.</p>  </div> <div> <p>(b) <math>56^\circ</math></p> </div> </div>
Q28	72cm
Q29	20% → \$200 100% → \$1000 $\$1000 + \$800 = \$1800$
Q30	Row 21 Column B

SECTION C

Q1	$123 \div 5 = 24R3$ $24 \times 4 = 96$ $96 + 3 - 1 = 98$																
Q2	(a) $300 \times 5 = 1500$ $1500 - 450 - 350 - 225 - 300 = 175$ (b) $300 - 225 = 75$ $75 \div 225 = 33\frac{1}{3}\%$																
Q3	$(180-90) \div 2 = 45^\circ$ $60 + 45 = 105^\circ$																
Q4	$2\pi r = 2 \times \pi \times 7$ $14\pi \times 5 = 70\pi$ $70\pi + 7 + 7 = (70\pi + 14)cm$																
Q5	<table border="1"> <thead> <tr> <th></th> <th>True</th> <th>False</th> <th>Not possible to tell</th> </tr> </thead> <tbody> <tr> <td>Nathan has more erasers than Rahim at first.</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>If Rahim increased his number of erasers by 3 times, he will have the same number of erasers as Nathan at first.</td> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Both boys had a total of 9y erasers at first.</td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>		True	False	Not possible to tell	Nathan has more erasers than Rahim at first.	✓			If Rahim increased his number of erasers by 3 times, he will have the same number of erasers as Nathan at first.	✓			Both boys had a total of 9y erasers at first.		✓	
	True	False	Not possible to tell														
Nathan has more erasers than Rahim at first.	✓																
If Rahim increased his number of erasers by 3 times, he will have the same number of erasers as Nathan at first.	✓																
Both boys had a total of 9y erasers at first.		✓															
Q6	$2p \rightarrow 635 - 403 = 232$ $1p \rightarrow 232 \div 2 = 116$ $5p \rightarrow 116 \times 5 = 580$ $635 - 580 = \$55$																
Q7	$5 \times 10¢ + 3 \times 20¢ + 1 \times 50¢ = 160¢ \leftarrow 1 \text{ set}$ $\$168.00 = 16800¢$ $16800 \div 160 = 105 \leftarrow \text{Total 105 sets}$ $105 \times 3 \times 0.20 = \$63 \leftarrow 105 \text{ sets} \times 3 \text{ coins of 20cents}$																
Q8	$428 \times 3 = 1284$ $1824 - 1284 = 540$ $540 \div (7 - 3) = 540 \div 4 = 135$																
Q9	(a) $\frac{2}{4} \times 6 = 4.5L$ $10 - 4.5 = 5.5L$ (b) $5.5 \div \frac{3}{8} = 9 R 0.1L$ <b>ANS <math>\rightarrow 0.1L</math></b>																
Q10	$\angle \text{SOR} = (117 + 138) - 180 = 75^\circ$ $\angle \text{ORS} = 180 - 90 - 75 = 15^\circ$																
Q11	$1 L \rightarrow 25 \div 2 = 12.5$ $1 S \rightarrow 44 \div 3 = 2\frac{1}{6}$ <b>Number of set : <math>65 \div 2\frac{1}{6} = 30</math></b> $30 \times 2 = 60 \text{ Jug}$																
Q12	$\angle \text{CDE} = 180 - 100 - 35 = 45^\circ$ (a) $\angle \text{GFC} = 180 - 72 = 108^\circ$ $\angle \text{GFE} = 108 + 45 = 153^\circ$																

Q12 (b)	$\angle HBG = (180-94) \div 2 = 43^\circ$ $\angle CBH = 108 - 43 = 65^\circ$
Q13	Area of rectangle $\rightarrow 24 \times 12 = 288$ Area of semicircle $\rightarrow 0.5 \times \pi \times 12 \times 12 = 226.08$ $288 - 226.08 = 61.92\text{cm}^2$ $61.92 \div 2 = 30.96\text{cm}^2$ $\frac{1}{4} \times \pi \times 12 \times 12 = 113.04$ $113.04 - 30.96 = 82.08\text{cm}^2$ $61.92 + 30.96 + 82.08 = 174.96\text{cm}^2$
Q14 (a)	$\frac{8u-360}{5u-180} = \frac{4}{5}$ $20u - 720 = 40u - 1800$ $40u - 20u = 1800 - 720$ $20u = 1080$ $u = 1080 \div 20 = 54$ Total at first $54 \times 13 = 702$
Q14 (b)	Linda at first $54 \times 5 = 270$ $270 - 180 = 90$
Q15	(a) $80\% \rightarrow 680$ $100\% \rightarrow 680 \div 8 \times 10 = 850$ (b) $850 - 680 = 170$ $170 - 129.20 = 40.80$ $\frac{40.80}{170} \times 100\% = 24\%$ Ans $\rightarrow 24\%$
Q16 (a)	2 triangles $= 1056 \div 2 = 528$ 2 triangles $= 3u \times 11u = 33u^2$ $528 \div 33 = 16u^2$ $u \rightarrow \sqrt{16} = 4$ The length of square $\rightarrow 11 - 8 = 8u$ $8u \rightarrow 8 \times 4 = 32\text{cm}$ $32 \times 32 = 1024\text{cm}^2$
Q16 (b)	Total area $= 1024 + 1056 = 2080$ $\sqrt{2080} = 45.6\text{m}$
Q17	(a) $3p = 75$ $p = 75 \div 3 = 25$ $25 \times 8 = 200$ (b) $200 - 5 - 10 - 15 - 20 = 150$ $150 \div 5 = 30$

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2/10.