METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

END-OF-YEAR EXAMINATION 2018
PRIMARY 5
MATHEMATICS

PAPER 1
BOOKLET A

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 26 October 2018

/20

This booklet consists of **6** printed pages including this 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. (20 marks)

---

1 Find the value of $5 \times 12 + 48 \times 10 \div 5$.

(1) 156

(2) 216

(3) 540

(4) 600

2 $692 \times 500 = 700 \times 500 - \square$

What is the missing number in the box?

(1) 400

(2) 900

(3) 4000

(4) 9000

3 Mother used $\frac{1}{3}$ m of cloth to make a doll and she had $\frac{1}{8}$ m of cloth left. How much cloth did she have at first?

(1) $\frac{2}{11}$ m

(2) $\frac{1}{24}$ m

(3) $\frac{5}{24}$ m

(4) $\frac{11}{24}$ m

4 What is $\frac{4}{25}$ in decimal?

(1) 6.25

(2) 1.6

(3) 0.16

(4) 0.016

5 $4 \div 1000 = 0\ 4 \div \square$

What is the missing number in the box?

(1) 0.01

(2) 0.1

(3) 10

(4) 100

6 8 out of 40 cats are male and the rest are female. What percentage of the cats is male?

(1) 20 %

(2) 25 %

(3) 80 %

(4) 83 %

7 A vase cost $50 before GST. A customer bought the vase and paid an additional 7% GST. How much was the GST?

(1) $0.30

(2) $0.70

(3) $3.50

(4) $7.00

8 $20 : \square : 35 = 16 : 20 : 28$

What is the missing number in the box?

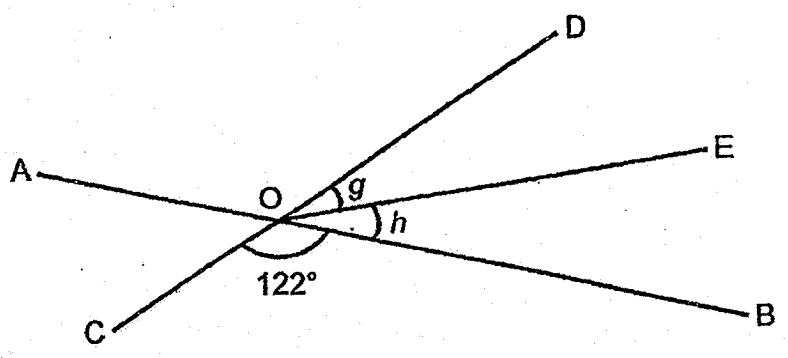
(1) 24

(2) 25

(3) 26

(4) 27

9 AB, CD and OE are straight lines. $\angle g = \angle h$. Find $\angle g$.



(1) 29°

(2) 30°

(3) 34°

(4) 58°

10 A number when rounded to the nearest hundred is 10 200.
Which one of the following is a possible number?

(1) 10 115

(2) 10 148

(3) 10 167

(4) 10 251

(Go on to the next page)

11 A rectangular tank measuring 100 cm by 70 cm by 60 cm was $\frac{4}{5}$ - filled with water. How much water was there in the tank?

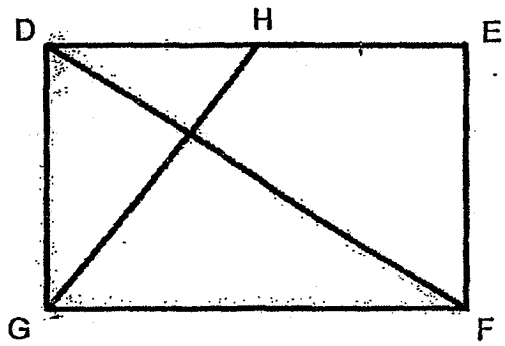
(1) 84 ℓ

(2) 336 ℓ

(3) 384 ℓ

(4) 420 ℓ

12 In the figure below, DEFG is a rectangle and DH = HE. What is the ratio of the area of triangle DHG to the area of triangle DFG.



(1) 1 : 2

(2) 1 : 3

(3) 2 : 1

(4) 3 : 1

13 Mei Ling gave $\frac{3}{8}$ of her salary to her mother and saved $\frac{1}{5}$ of the remainder. What fraction of her salary did she save?

(1) $\frac{3}{40}$

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

(3) $\frac{7}{40}$

(4) $\frac{17}{40}$

14 The length and breadth of a rectangle are $\frac{4}{5}$ m and $\frac{7}{10}$ m respectively. What is the area of the rectangle?

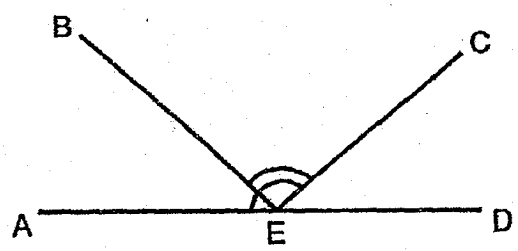
(1) $\frac{14}{25}$ m^2

(2) $\frac{1}{10}$ m^2

(3) $\frac{11}{15}$ m^2

(4) $\frac{56}{100}$ m^2

15 In the figure below, AD is a straight line. $\angle AEC = 119°$ and $\angle BED = 155°$. Find $\angle BEC$.



(1) 36°

(2) 54°

(3) 94°

(4) 137°

METHODIST GIRLS' SCHOOL (PRIMARY)

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MID YEAR EXAMINATION 2018
PRIMARY 5
MATHEMATICS

PAPER 1
BOOKLET B

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 26 October 2018

Parent's Signature: _____

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 25**
Paper 2	**/ 55**
TOTAL	**/ 100**

This booklet consists of **8** printed pages including this page.

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 Round 500 782 to the nearest thousand.

Ans: _____

17 $627.8 \div \square = 6.278$

What is the missing number in the box?

Ans: _____

18 Express 3 km 4 m in kilometres.

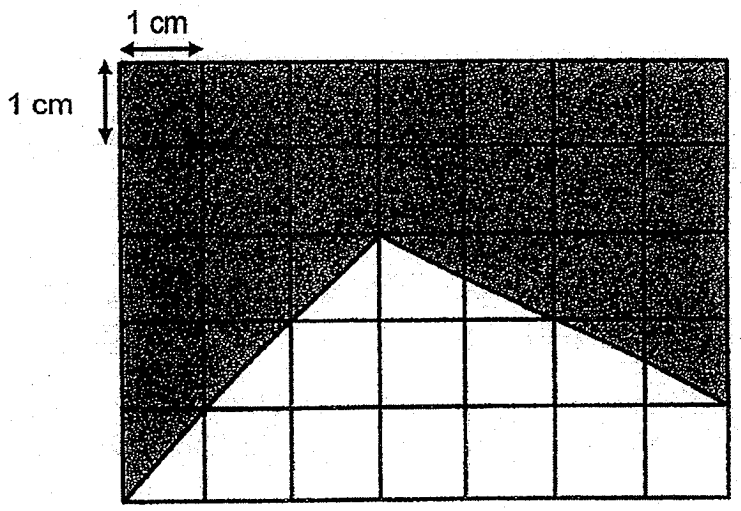
Ans: _____ km

19 What is 25% of 300?

Do not write in this space

Ans: _____

20 Find the area of the **unshaded** region.



Ans: _____ cm^2

(Go on to the next page)

Questions **21** 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. (20 marks)

Do not write in this space

21 Rani had 210 fruits altogether. $\frac{3}{7}$ of the fruits were apples and $\frac{2}{5}$ of the remainder were oranges. How many oranges did she have?

Ans: _____

22 Meiling deposited $20 000 in a fixed deposit account which pays an interest of 2% per year. How much money did she have in her account at the end of one year?

Ans: $_____

(Go on to the next page)

23 Ramad had 150 keychains. He gave away 40% of his keychains. How many keychains had he left?

Do not write in this space

Ans: _____

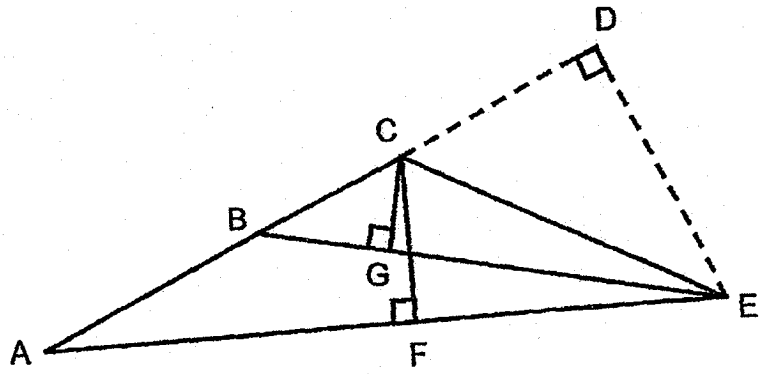
24 Tom, Bob and Ali have some stamps in the ratio of 3 : 6 : 2. They have a total of 187 stamps. How many stamps does Bob have?

Ans: _____

(Go on to the next page)

25 Study the diagram below and answer the following questions.

Do not write in this space



(a) DE is the height of triangle ACE.
Name the line that represents the base of the same triangle.

(b) AE is the base of triangle ACE.
Name the line that represents the height of the same triangle.

Ans: (a) Base: _____

(b) Height: _____

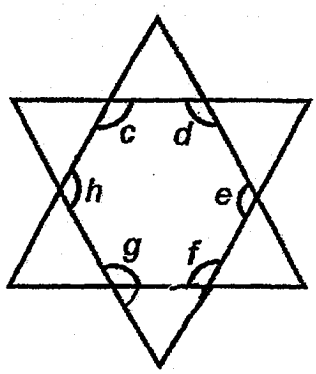
26 Mary's mother gave her $76 in February. She spent all her money during recess from Monday to Friday. There were 4 weeks in that month. What was the average amount of money Mary spent on a weekday?

Ans: $ _____

(Go on to the next page)

27 The figure below is formed by 2 equilateral triangles.
Find $\angle c + \angle d + \angle e + \angle f + \angle g + \angle h$.

Do not write in this space



Ans: _____ °

28 The table below shows the number of cars sold by Blackmore Company from January to May. The average number of cars sold per month was 30. How many cars were sold in the month of April?

Month	Number of Cars
January	40
February	13
March	25
April	?
May	38

Ans: _____

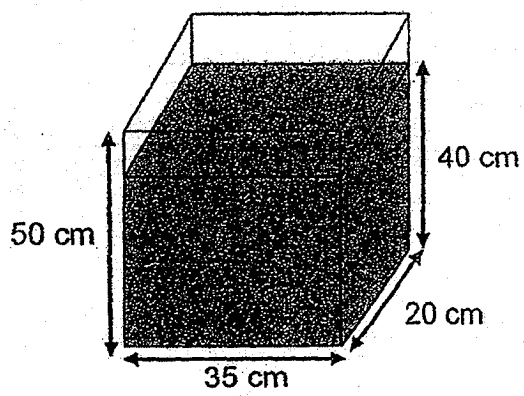
(Go on to the next page)

29 Mrs Tang needs 2.05 kg of flour to bake a cake and 1.5 kg of flour to bake 12 cupcakes. How much flour would she need to bake 2 cakes and 6 cupcakes?

Do not write in this space

Ans: _____ kg

30 The box below is filled with sand to a height of 40 cm.



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

Statement	True	False	Not possible to tell
$\frac{1}{5}$ of the box is not filled with sand.			
If the length, breadth and height of the box is increased by 2 cm each, the volume of the box is increased by 8 cm^3.			

END OF PAPER

METHODIST GIRLS' SCHOOL (PRIMARY)

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~~MID~~-YEAR EXAMINATION 2018
PRIMARY 5
MATHEMATICS

PAPER 2

Duration: 1h 30 min

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of an approved calculator is expected, where appropriate.

Name: _____ ( )

Class: Primary 5._____

Date: 26 October 2018

/ 55

Parent's Signature: _____

This booklet consists of 14 printed pages including this 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)

Do not write in this space

1 Rambutans were sold at $3 per kilogram. Siti paid $15.60 for her rambutans. Jenny paid $28.20 for her rambutans.

How many more kilograms of rambutans did Jenny buy than Siti?

Ans: _____ kg

2 Terry bought a car for $153 000. He made a deposit of $75 000. He then paid the remaining amount in equal monthly payments over 6 months.

How much was the monthly payment?

Ans: $ _____

(Go on to the next page)

3 There were 420 people in an auditorium. 126 of the people were children. What percentage of the people were adults?

Do not write in this space

Ans: _____ %

4 The ratio of the number of males to the number of females on a train was 7 : 3. After 12 females alighted from the train and another 12 males boarded the train, the ratio of the number of males to the number of females became 4 : 1. Find the number of males in the train at first.

Ans: _____

(Go on to the next page)

5 A Science competition had 84 winners. $\frac{1}{2}$ of the winners won either bronze or gold medals. $\frac{5}{6}$ of the winners won either gold or silver medals. How many of the winners won gold medals?

Do not write in this space

Ans: _____

(Go on to the next page)

For questions 6 to 17, show your working clearly and write your answers in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (45 marks)

Do not write in this space

6 In 2001, Donny was 10 years old and his father was 52 years old.

In which year was Donny's father 8 times as old as Donny?

Ans: _____ [3]

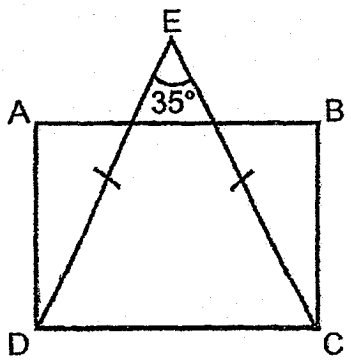
7 Penny read $\frac{2}{5}$ of a story book in the morning. In the afternoon, she read another 100 pages. After that, she had $\frac{1}{3}$ of the book left to read.

How many pages were there in the book?

Ans: _____ [3]

(Go on to the next page)

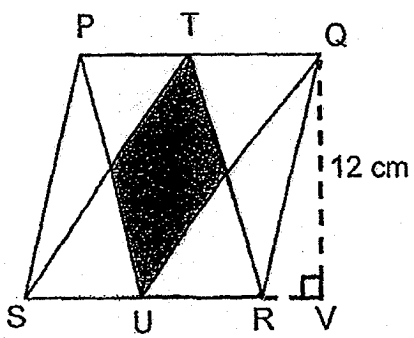
8 In the diagram below, ABCD is a rectangle and ECD is an isosceles triangle. $\angle DEC = 35°$. Find $\angle EDA$.



Do not write in this space

Ans: _____ [3]

9 PQRS is a rhombus of sides 13 cm. Points T and U are the mid-points of lines PQ and SR respectively. QV = 12 cm. Find the area of the shaded region.



Ans: _____ [3]

(Go on to the next page)

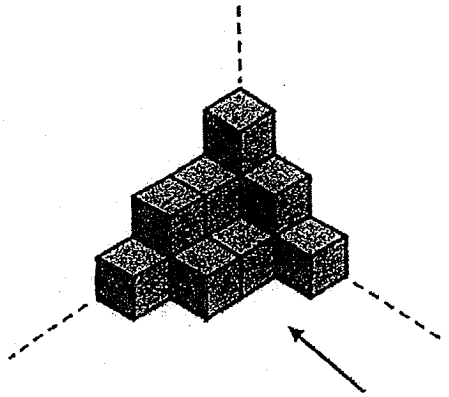
10 The solid below is made up of 1-cm cubes.

Do not write in this space

(a) Draw the side view of the solid in the grid provided.

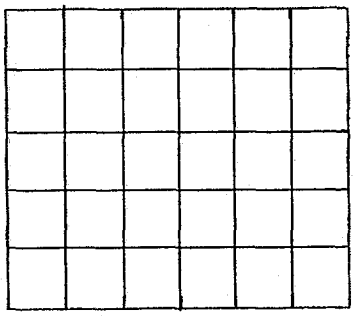
(b) What is the volume of the solid below?

(c) How many more cubes are needed to build a cube with sides 4 cm?



Side View

(a)



[1]

Ans: (b) _____ [1]

(c) _____ [1]

(Go on to the next page)

11 A box of 5280 sweets were shared among 400 children with no remainder. Each girl received 18 sweets and each boy received 10 sweets.

(a) How many girls were there?

(b) How many boys were there?

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [1]

(Go on to the next page)

12 Mr Lim has 1350 bags. He sold $\frac{1}{6}$ of the bags on Monday and 126 bags on Tuesday. What percentage of the bags did he sell in total?

Do not write in this space

Ans: _____ [4]

(Go on to the next page)

13 Mrs Tan placed an order for some necklaces and bracelets for a sum of $63 700. Each bracelet cost $2450 and each necklace cost twice as much as a bracelet. Mrs Tan ordered 7 necklaces more than bracelets.

Do not write in this space

(a) How many bracelets did Mrs Tan order?

(b) How many necklaces did Mrs Tan order?

Ans: (a) _____ [3]

(b) _____ [1]

(Go on to the next page)

14 An instructor had some counters to hand out to his participants.
If he gave each participant 11 counters, he would have 5 extra counters.
If he gave each participant 15 counters, he would be short of 175 counters.

(a) How many participants were there?

(b) How many counters did the instructor have?

Do not write in this space

Ans: (a) _____ [2]

(b) _____ [2]

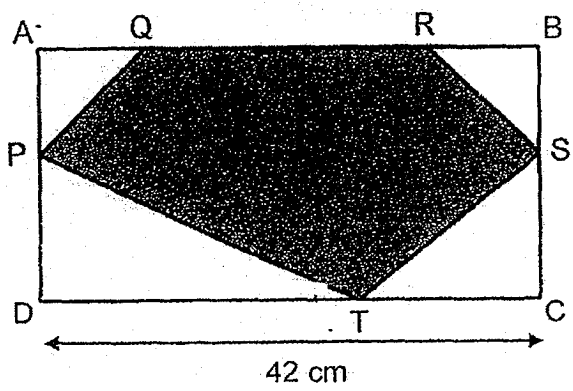
(Go on to the next page)

15 In the diagram below, ABCD is a rectangle. The length of the rectangle is twice its breadth. The ratio of the length of AP to the length of AD is 3 : 7.

Do not write in this space

(a) Find the length of AD.

(b) Find the area of the shaded region.



Ans: (a) _____ [1]

(b) _____ [4]

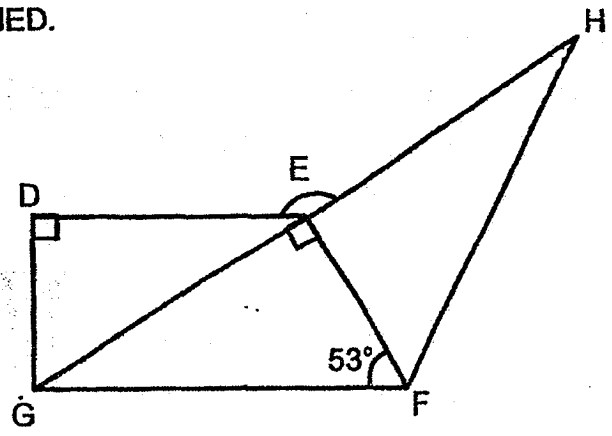
(Go on to the next page)

16 In the figure below, DEFG is a trapezium and FGH is a triangle. GF = FH.

Do not write in this space

(a) Name two angles that are equal to ∠DEG.

(b) Find ∠HED.



Ans: (a) _____ & _____ [1]

(b) _____ [3]

(Go on to the next page)

17 A rectangular tank 80 cm by 55 cm by 75 cm contained some water. Raja poured in another 112 ℓ of water and the tank became $\frac{7}{8}$ - full.

(a) How much water was in the tank at first?

(b) Mary then poured some more water into the tank and 1 500 mℓ of water overflowed. How much water did Mary pour in?
Give **both** answers in litres.

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

End of Paper 2

SCHOOL : MGS PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : MATH
TERM : 2018 SA2

PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	3	4	3	4	1	3	2	1	3

Q 11	Q12	Q13	Q14	Q15
2	1	2	1	3

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

END-OF-YEAR EXAMINATION 2018
PRIMARY 5
MATHEMATICS

PAPER 1
BOOKLET B

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 5._____

Date: 26 October 2018

Parent's Signature: _____

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 25**
Paper 2	**/ 55**
TOTAL	**/ 100**

This booklet consists of **8** printed pages including this page.

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 Round 500 782 to the nearest thousand.

Ans: 501 000

17 627.8 ÷ ☐ = 6.278

What is the missing number in the box?

Ans: 100

5.1 **18** Express 3 km 4 m in kilometres.

Ans: 3.004 km

(Go on to the next page)

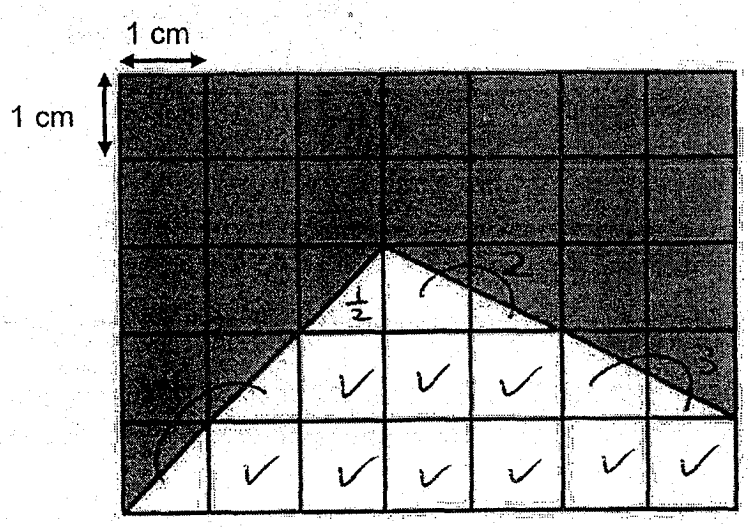
19 What is 25% of 300?

Do not write in this space

$\frac{25}{100} \times 300 = 75$

Ans: 75

20 Find the area of the **unshaded** region.



Ans: 12.5 / $12\frac{1}{2}$ cm^2

(Go on to the next page)

Questions **21** 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. (20 marks)

Do not write in this space

21 Rani had 210 fruits altogether. $\frac{3}{7}$ of the fruits were apples and $\frac{2}{5}$ of the remainder were oranges. How many oranges did she have?

210 → $\frac{3}{7}$ (Apples)

210 → $\frac{4}{7}$ (rem) → $\frac{2}{5}$ (Oranges) ?

M1 $\frac{2}{\cancel{5}_{1}} \times \frac{4}{\cancel{7}_{1}} \times \frac{\cancel{30}^{6}}{\cancel{210}} = 48$

She had 48 oranges.

$210 \div 7 = 30$

$30 \times 3 = 90$ (A)

$210 - 90 = 120$ (Remainder)

M1 $120 \div 5 = 24$

$24 \times 2 = 48$ (Oranges)

A1

Ans: 48

22 Meiling deposited $20 000 in a fixed deposit account which pays an interest of 2% per year. How much money did she have in her account at the end of one year?

$\frac{2}{\cancel{100}} \times \cancel{20\,000}$

$= 400$

M1

$20\,000 + 400$

$= 20400$

She had $20400

OR

M1

$\frac{102}{\cancel{100}} \times \$\cancel{20\,000}$

$= \$20400$

She had $20 400.

A1

Ans: $ 20 400

(Go on to the next page)

23 Ramad had 150 keychains. He gave away 40% of his keychains. How many keychains had he left?

Do not write in this space

M1

$\frac{60}{100} \times 150 = 90$

OR

$\frac{40}{100} \times 150 = 60$

M1

$150 - 60 = 90$

He had 90 keychains left.

A1

Ans: 90

24 Tom, Bob and Ali have some stamps in the ratio of 3 : 6 : 2. They have a total of 187 stamps. How many stamps does Bob have?

T	B	A	Total
3	6	2	11u

$11u = 187$

$1u = 187 \div 11$

$= 17$

$6u = 17 \times 6$ — M1

$= 102$

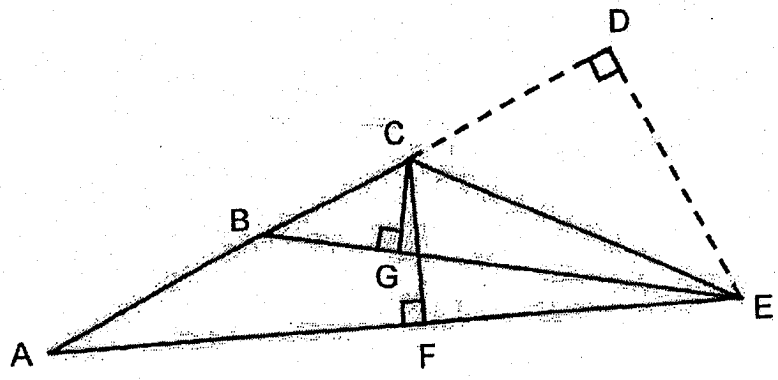
A1

Ans: 102

(Go on to the next page)

Do not write in this space

25 Study the diagram below and answer the following questions.



(a) DE is the height of triangle ACE.
Name the line that represents the base of the same triangle.

(b) AE is the base of triangle ACE.
Name the line that represents the height of the same triangle.

Ans: (a) Base: A1 AC / CA

(b) Height: A1 CF / FC

26 Mary's mother gave her $76 in February. She spent all her money during recess from Monday to Friday. There were 4 weeks in that month. What was the average amount of money Mary spent on a weekday?

$4 \times 5 = 20$

M1

$\$76 \div 20 = \$76 \div 2 \div 10$

$= \$38 \div 10$

$= \$3.80$

The average was $3.80.

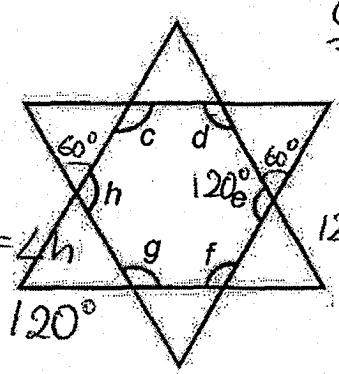
Ans: $ A1 3.80

(Go on to the next page)

5.1

27 The figure below is formed by 2 equilateral triangles.
Find $\angle c + \angle d + \angle e + \angle f + \angle g + \angle h$.

Do not write in this space



OR

$180° - 60° = 120°$

$180° - 60° = 120°$

$\angle c = \angle d = \angle e = \angle f = \angle g = \angle h$

$= 120°$

$120° + 120° + 120° + 120° + 120° + 120°$ — M

$= 720°$

M1

$120° \times 6 = 720°$

The sum is $720°$

A1

Ans: 720 °

---

28 The table below shows the number of cars sold by Blackmore Company from January to May. The average number of cars sold per month was 30. How many cars were sold in the month of April?

Month	Number of Cars
January	40
February	13
March	25
April	?
May	38

53

116

63

$30 \times 5 = 150$

$150 - (40 + 13 + 25 + 38)$ — M1

$= 150 - 116$

$= 34$

34 cars were sold.

A1

Ans: 34

(Go on to the next page)

5.1

29 Mrs Tang needs 2.05 kg of flour to bake a cake and 1.5 kg of flour to bake 12 cupcakes. How much flour would she need to bake 2 cakes and 6 cupcakes?

Do not write in this space

$2.05 \times 2 = 4.1$

$1.5 \div 2 = 0.75$

M1

$4.1 + 0.75 = 4.85$

$$\begin{array}{r} 0.75 \\ 2\overline{)1.50} \\ -0\downarrow \\ \hline 15 \\ -14\downarrow \\ \hline 10 \\ -10 \\ \hline 0 \end{array}$$

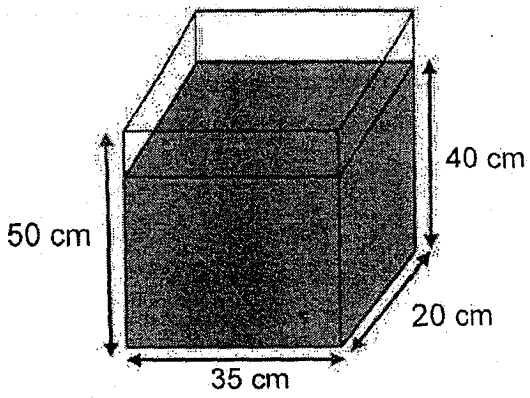
A1

She would need 4.85 kg of flour.

Ans: 4.85 kg

---

30 The box below is filled with sand to a height of 40 cm.



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

Statement	True	False	Not possible to tell
$\frac{1}{5}$ of the box is not filled with sand.	✓		
If the length, breadth and height of the box is increased by 2 cm each, the volume of the box is increased by 8 cm^3.		✓	

END OF PAPER

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

END-OF-YEAR EXAMINATION 2018
PRIMARY 5
MATHEMATICS

PAPER 2

Duration: 1h 30 min

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of an approved calculator is expected, where appropriate.

Name: _____ ( )

Class: Primary 5._____

Date: 26 October 2018

55

Parent's Signature: _____

This booklet consists of **14** printed pages including this 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)

Do not write in this space

1 Rambutans were sold at \$3 per kilogram. Siti paid \$15.60 for her rambutans. Jenny paid \$28.20 for her rambutans.
How many more kilograms of rambutans did Jenny buy than Siti?

$15.6 \div 3 = 5.2$

$28.2 \div 3 = 9.4$

$9.4 - 5.2 = 4.2$ —— M1, A1

4.2 kg more

Ans: 4.2 kg

2 Terry bought a car for \$153 000. He made a deposit of \$75 000. He then paid the remaining amount in equal monthly payments over 6 months.
How much was the monthly payment?

$153\,000 - 75\,000 = 78\,000$

$78\,000 \div 6 = 13\,000$ —— M1, A1

It was \$13 000.

Ans: \$ 13000

(Go on to the next page)

3 There were 420 people in an auditorium. 126 of the people were children. What percentage of the people were adults?

Do not write in this space

400 − 126 = 294 (Adults)

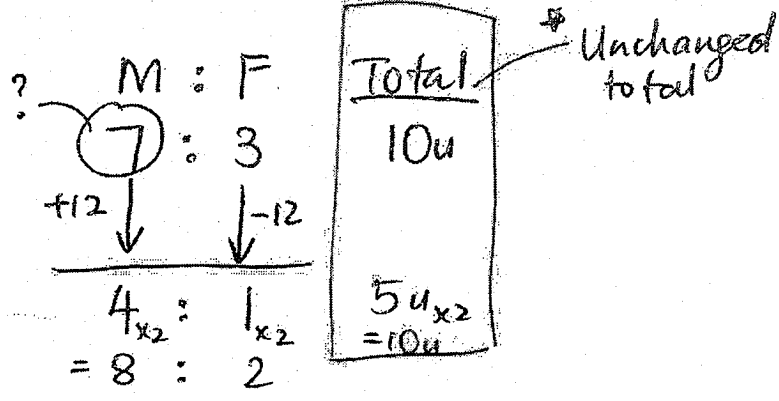
$\frac{294}{400} \times 100\% = 70\%$ — M1, A1

70% of the people were adults.

Ans: 70 %

4 The ratio of the number of males to the number of females on a train was 7 : 3. After 12 females alighted from the train and another 12 males boarded the train, the ratio of the number of males to the number of females became 4 : 1. Find the number of males in the train at first.

Total Unchanged Concept



8u − 7u = 1u

3u − 2u = 1u

1u = 12

7u = 12 × 7 = 84

Ans: 84

There were 84 males at first.

(Go on to the next page)

5 A Science competition had 84 winners. $\frac{1}{2}$ of the winners won either bronze or gold medals. $\frac{5}{6}$ of the winners won either gold or silver medals. How many of the winners won gold medals?

Do not write in this space

Method 1:

Fraction (Silver) → $1 - \frac{1}{2} = \frac{1}{2}$

Fraction (bronze) → $1 - \frac{5}{6} = \frac{1}{6}$

Fraction (gold) → $\frac{1}{2} - \frac{1}{6} = \frac{1}{3}$

No. of gold → $\frac{1}{3} \times 84$ — M1

$= 28$ A1

Method 2:

Silver → $84 \div 2 = 42$

Gold or Silver → $\frac{5}{6} \times 84 = 70$

Gold → $70 - 42 = 28$ — M1 A1

28 won gold medals.

Ans: 28

(Go on to the next page)

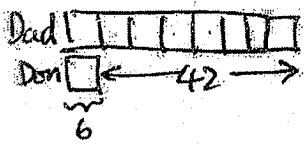
For questions **6** to **17**, show your working clearly and write your answers in the space provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (45 marks)

Do not write in this space

* (6) In 2001, Donny was 10 years old and his father was 52 years old.
In which year was Donny's father 8 times as old as Donny?

Difference Unchanged Concept.

2001



$52 - 10 = 42$ (Age difference)

$42 \div 7 = 6$ (Donny's age then) —— M1

$10 - 6 = 4$ years ago.

$2001 - 4 = 1997$ —— M1, A1

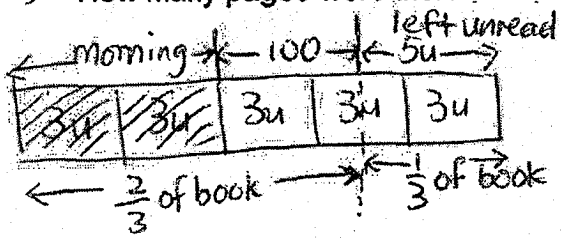
In 1997, Donny's father was 8 times as old as Donny.

Ans: 1997 [3]

(7) Penny read $\frac{2}{5}$ of a story book in the morning. In the afternoon, she read another 100 pages. After that, she had $\frac{1}{3}$ of the book left to read.

Model Drawing

How many pages were there in the book?



$\frac{2}{3}$ of book ⟶ $2u + 100$

$\frac{1}{3}$ of book ⟶ $1u + 50$

$2u = 100 + 50 = 150$ —— M1

$1u = 150 \div 2$

$= 75$

$5u = 75 \times 5$ —— M1

$= 375$ A1 5

$\frac{2}{5} + \frac{1}{3} = \frac{6}{15} + \frac{5}{15}$

$= \frac{11}{15}$

$1 - \frac{11}{15} = \frac{4}{15}$ —— M1

$4u = 100$

$1u = 100 \div 4 = 25$

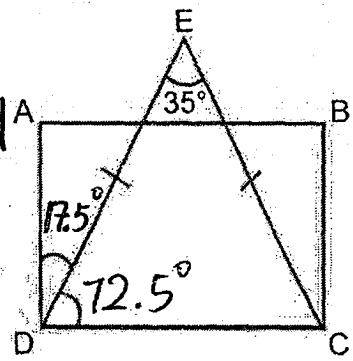
$15u = 25 \times 15 = 375$ —— M1, A1

Ans: 375 [3]

(Go on to the next page)

Do not write in this space

8 In the diagram below, ABCD is a rectangle and ECD is an isosceles triangle. ∠DEC = 35°. Find ∠EDA.



$\angle EDC = (180° - 35°) \div 2$ —M1

$= 72.5°$

$\angle EDA = 90° - 72.5°$ —M1

$= 17.5°$ A1

The ∠EDA is 17.5°.

Ans: 17.5° [3]

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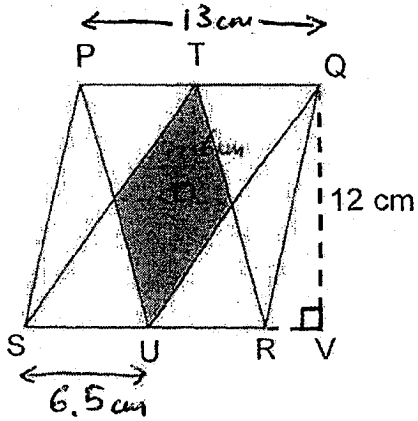
9 PQRS is a rhombus of sides 13 cm. Points T and U are the mid-points of lines PQ and SR respectively. QV = 12 cm. Find the area of the shaded region.



Method 1:

$\frac{1}{2} \times 6.5 \times 6 = 19.5$ —M1

$19.5 \times 2 = 39$ —M1A1

Method 2:

Area of $\triangle STR = (\frac{1}{2} \times 13 \times 12)\ cm^2$ —M1

$= 78\ cm^2$

Area of shaded part $= 78\ cm^2 \div 2$

$= 39\ cm^2$

The shaded area is $39\ cm^2$.

Ans: $39\ cm^2$ [3]

Method 3:

$13 \times 12 = 156$

(Go on to the next page)

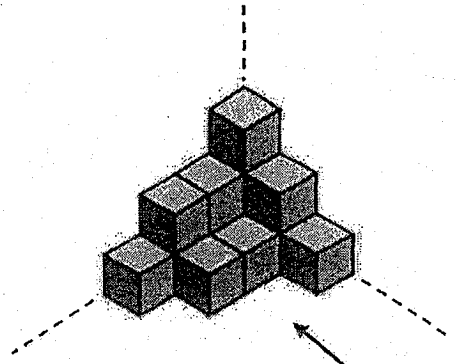
10 The solid below is made up of 1-cm cubes.

Do not write in this space

(a) Draw the side view of the solid in the grid provided.

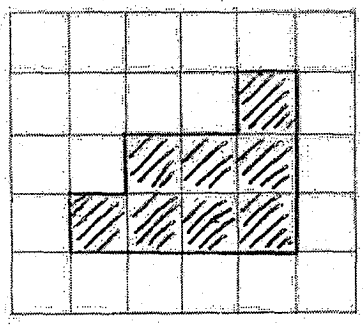
(b) What is the volume of the solid below?

(c) How many more cubes are needed to build a cube with sides 4 cm?



Side View

(a)



A1

[1]

b) Top → 1
2nd level → 4
Bottom → 8
Total 1 + 4 + 8 = 13
The volume is 13 cm³. — A1

c) 4 × 4 × 4 = 64
64 − 13 = 51 — A1
51 more cubes.

Ans: (b) 13 cm³ [1]

(c) 51 [1]

(Go on to the next page)

(11) A box of 5280 sweets were shared among 400 children with no remainder. Each girl received 18 sweets and each boy received 10 sweets.

Use Assumption Method.

(a) How many girls were there?

(b) How many boys were there?

Do not write in this space

Assume all 400 children are boys.

a) $400 \times 10 = 4000$

$5280 - 4000 = 1280$ —— M1

$1280 \div (18-10) = 1280 \div 8$ —— M1

$= 160$ (girls)

There were 160 girls —— A1

b) $400 - 160 = 240$ (boys)

There were 240 boys. —— A1

Ans: (a) 160 girls [3]

(b) 240 boys [1]

(Go on to the next page)

12 Mr Lim has 1350 bags. He sold $\frac{1}{6}$ of the bags on Monday and 126 bags on Tuesday. What percentage of the bags did he sell in total?

Do not write in this space

$\frac{1}{6} \times 1350 = 225$ ——M1

$126 + 225 = 351$ ——M1

$\frac{351}{1350} \times 100\% = 26\%$ ——M1 A1

He sold 26% of the bags.

Ans: 26% [4]

(Go on to the next page)

13 Mrs Tan placed an order for some necklaces and bracelets for a sum of $63 700. Each bracelet cost $2450 and each necklace cost twice as much as a bracelet. Mrs Tan ordered 7 necklaces more than bracelets.

Do not write in this space

(a) How many bracelets did Mrs Tan order?

(b) How many necklaces did Mrs Tan order?

Cost of necklace → $2450 × 2
= $4900

a) 7 more necklaces → $4900 × 7
= $34300

$63700 − $34300 = $29400 —— M1

$29400 ÷ ($2450 + $4900) = 4 —— M1, A1
(pair up)

She ordered 4 bracelets.

b) 4 + 7 = 11 —— A1

She ordered 11 necklaces.

Ans: (a) 4 [2]

(b) 11 [1]

(Go on to the next page)

Excess and Shortage.

14 An instructor had some counters to hand out to his participants.
If he gave each participant 11 counters, he would have 5 extra counters. (excess)
If he gave each participant 15 counters, he would be short of 175 counters. (shortage)

Do not write in this space

(a) How many participants were there?
(b) How many counters did the instructor have?

a) $5 + 175 = 180$

$15 - 11 = 4$

$180 \div 4 = 45$ —— M1, A1

There were 45 participants.

b) $45 \times 11 + 5 = 500$ —— M1, A1

or

$45 \times 15 - 175 = 500$ —— M1, A1

There were 500 counters.

Ans: (a) 45 [2]

(b) 500 [2]

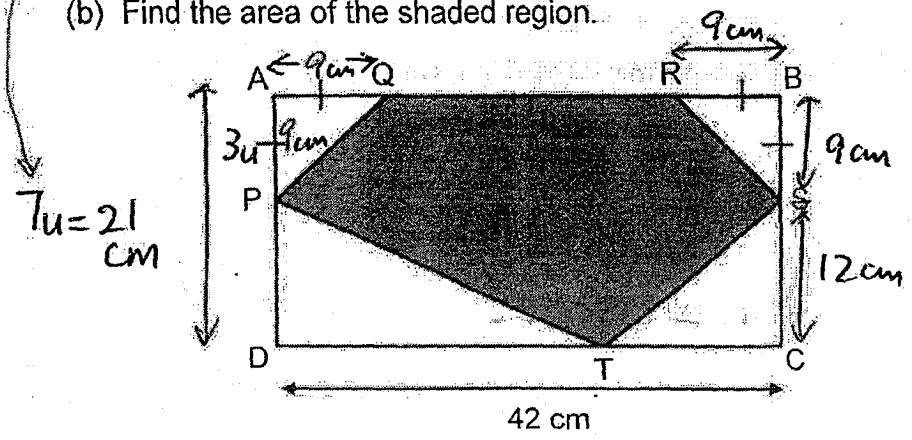
(Go on to the next page)

Do not write in this space

15 In the diagram below, ABCD is a rectangle. The length of the rectangle is twice its breadth. The ratio of the length of AP to the length of AD is 3 : 7.

(a) Find the length of AD.

(b) Find the area of the shaded region.



7u = 21 cm

a) Breadth → 42 ÷ 2 = 21 ——— A1

Length AD is 21 cm.

b) Area of rectangle → 42 × 21 = 882

7u = 21

1u = 21 ÷ 7 = 3

3u = 3 × 3 = 9

21 cm − 9 cm = 12 cm

Area of 2 small △s → $\left(\frac{1}{2} \times 9 \times 9\right) \times 2 = 81$

Area of Big unshaded △s $\frac{1}{2} \times \overset{21}{\cancel{42}} \times 12 = 252$

Area of shaded part → 882 − 81 − 252 = 549

The area of shaded region is 549 cm².

Ans: (a) 21 cm [1]

(b) 549 cm² [4]

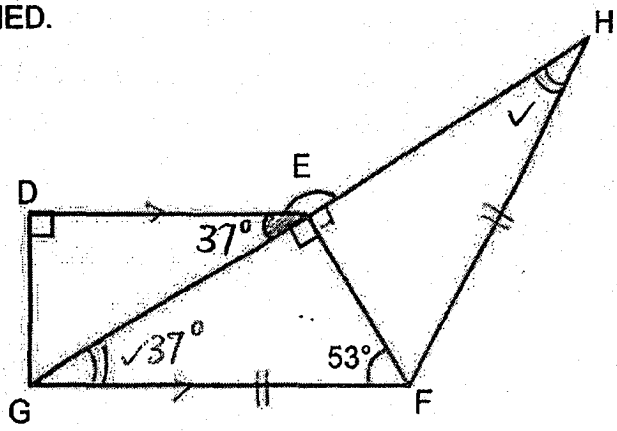
(Go on to the next page)

16 In the figure below, DEFG is a trapezium and FGH is a triangle. GF = FH.

Do not write in this space

(a) Name two angles that are equal to ∠DEG.

(b) Find ∠HED.



a) ∠EGF and ∠EHF —— A1

b) ∠EGF = 180° − 90° − 53° —— M1
= 37°

∠DEG = ∠EGF = 37°

M1
∠HED = 360° − 180° − 37° or 180° − 37° —— M1
= 180° − 37°
= 143° —— A1

= 143° —— A1

∠FGE ∠FHE
Ans: (a) ∠EGF & ∠EHF [1]
(b) 143° [3]

(Go on to the next page)

17 A rectangular tank 80 cm by 55 cm by 75 cm contained some water.

Raja poured in another 112 ℓ of water and the tank became $\frac{7}{8}$ - full.

(a) How much water was in the tank at first?

(b) Mary then poured some more water into the tank and 1 500 mℓ of water overflowed. How much water did Mary pour in?

Give **both** answers in litres.

Do not write in this space

a)

$\frac{7}{8} \times 80 \times 55 \times 75 = \frac{7}{8} \times 330\,000$ —— M1

$= 288\,750$

$288\,750\ cm^3 = 288.75\ \ell$

$288.75 - 112 = 176.75$ —— M1, A1

There was 176.75ℓ at first

b) Method 1

$330\,000 + 1500$

$= 331\,500$

$331.5 - 288.75$ —— M1

$= 42.75$ —— A1

Many poured in 42.75ℓ.

Method 2

$\frac{1}{8} \times 330\,000 = 41\,250$

$41\,250 + 1500$ —— M1

$= 42\,750$

$42\,750 ml = 42.75\ \ell$ —— A1

Ans: (a) 176.75ℓ [3]

(b) 42.75ℓ [2]

End of Paper 2