

**Anglo-Chinese School
(Junior)**



**SEMESTRAL ASSESSMENT 1 (2011)
PRIMARY 6**

MATHEMATICS

**PAPER 1
Booklet A**

Thursday

12 May 2011

50 min

INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 15 questions in this booklet.

Answer A.L questions.

You are not allowed to use a calculator.

Name : _____ ()

Class : 6.()

Parent's Signature: _____

This question paper consists of 8 printed pages. (Inclusive of cover page)

ACS(J) P6 MA SA1 2011

A 1

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.
For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer sheet. (20 marks)

1 625 978 is 10 000 more than _____.

(1) 525 978

(2) 615 978

(3) 624 978

(4) 635 978

2 $\frac{1}{3}$ of X is equal to $\frac{1}{4}$ of Y. What is the ratio X : Y ?

(1) 1 : 3

(2) 2 : 3

(3) 3 : 4

(4) 4 : 5

3 A car travels 85.5 km on 5 ℓ of petrol. How far does it travel on 3 ℓ of petrol?

(1) 17.1 km

(2) 28.5 km

(3) 51.3 km

(4) 80.5 km

4 There are 115 pupils in a school's badminton CCA. There are 23 more boys than girls. What is the ratio of the number of boys to the number of girls?

(1) 2 : 1

(2) 3 : 1

(3) 3 : 2

(4) 4 : 1

5 The average amount of orange juice in 4 jugs is $1\ell\ 650\text{ml}$. The average amount of orange juice in 3 of the jugs is $1\ell\ 50\text{ml}$. What is the amount of orange juice in the fourth jug?

(1) 600 ml

(2) $2\ell\ 100\text{ml}$

(3) $3\ell\ 450\text{ml}$

(4) $6\ell\ 600\text{ml}$

6 An MP3 player cost \$80. Bala bought it at a 20% discount during a sale. How much did he pay?

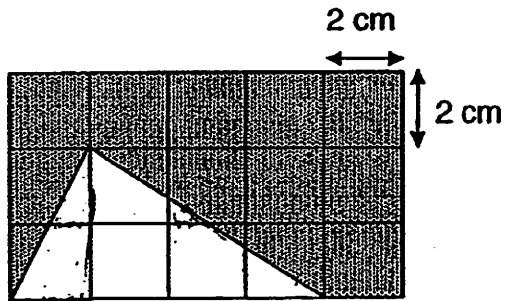
(1) \$16

(2) \$48

(3) \$64

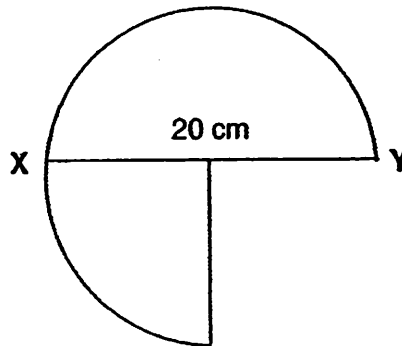
(4) \$72

7. Find the area of the unshaded figure below (Figure not drawn to scale).



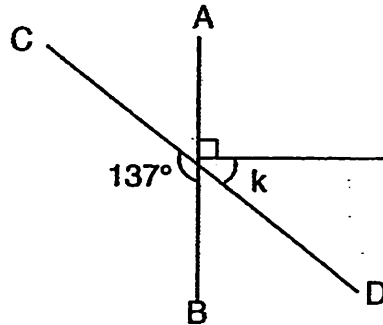
- (1) 4 cm^2
- (2) 16 cm^2
- (3) 32 cm^2
- (4) 60 cm^2

8. Given that XY is the diameter of the circle (not drawn to scale), what is the area of the figure? Leave your answers in terms of π .

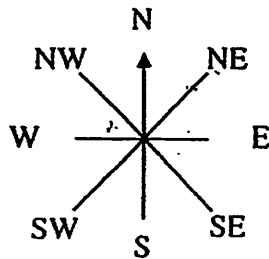


- (1) $75\pi \text{ cm}^2$
- (2) $100\pi \text{ cm}^2$
- (3) $300\pi \text{ cm}^2$
- (4) $400\pi \text{ cm}^2$

- 9 In the figure shown below (not drawn to scale), AB and CD are straight lines. Find $\angle k$

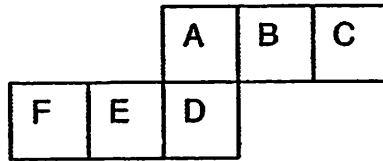


- (1) 37°
 (2) 43°
 (3) 45°
 (4) 47°
- 10 If Creighton makes a 270° clockwise turn, he would face North-West. Where will Creighton face if he makes a 135° anti-clockwise turn from the original position?



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

- 11 The figure below shows the net of a cube. If B is the top of the cube, which one of the faces A, C, D, E or F is the base of the cube?



- (1) A
(2) D
(3) E
(4) F
- 12 Melissa took 10 minutes to cycle the full distance from her home to the park. When she jogged $\frac{1}{5}$ of the distance from her home to the park and cycled the remaining distance, she took 16 minutes for the whole journey. How long would Melissa take if she jogged the full distance to the park? (Assume that she jogged and cycled at a constant speed)
- (1) 10 minutes
(2) 24 minutes
(3) 32 minutes
(4) 40 minutes

- 13 Ali spent a total of 16 hours working on a school project. He completed it in 5 days. If Ali spent an equal amount of time each day on the project, how many hours would he have spent per day?

(1) $1\frac{3}{5}$ h

(2) $3\frac{1}{5}$ h

(3) $3\frac{2}{5}$ h

(4) $4\frac{1}{5}$ h

- 14 Ahmad, Betty and Charlie shared \$700 in the ratio 3 : 4 : 7. Betty used $\frac{1}{4}$ of her share to buy a dress. How much money had she left?

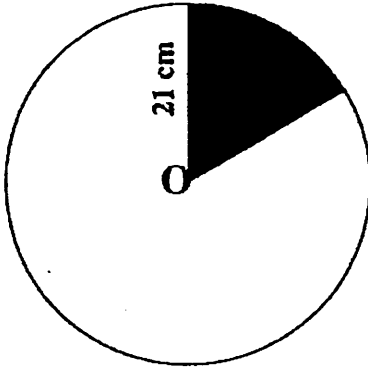
(1) \$50

(2) \$100

(3) \$125

(4) \$150

- 15 In the figure, O is the centre of the circle. If $\frac{1}{6}$ of the figure is shaded, find the perimeter of the **unshaded** part. (Correct your answer to the nearest whole number.)
(Take $\pi = \frac{22}{7}$)



- (1) 108 cm
- (2) 110 cm
- (3) 152 cm
- (4) 174 cm

**Anglo-Chinese School
(Junior)**



**SEMESTRAL ASSESSMENT 1 (2011)
PRIMARY 6**

MATHEMATICS

**PAPER 1
Booklet B**

Thursday

12 May 2011

50 min

INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 15 questions in this booklet.

Answer ALL questions.

You are not allowed to use a calculator.

Name : _____ ()

Class : 6.()

Parent's Signature: _____

Booklet	Possible Marks	Marks Obtained
A	20	
B	20	
TOTAL	40	

This question paper consists of 7 printed pages. (Inclusive of cover page)

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16 How many eighths are there in $1\frac{1}{8}$?

Ans: _____

17 Johnny started cycling at 11.35 p.m. If he reached his destination at 2.14 a.m. the next day, how long was his journey?

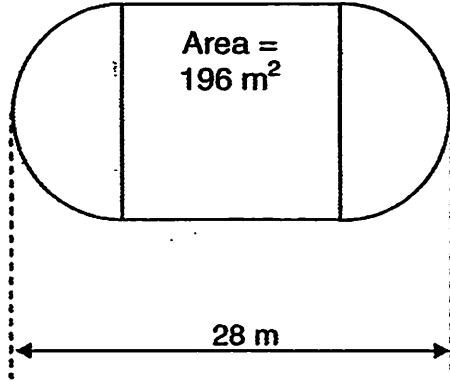
Ans: _____ hr _____ min

18 James has \$48. Ryan has \$10 more than James. What is the average amount of money they have?

Ans: \$ _____

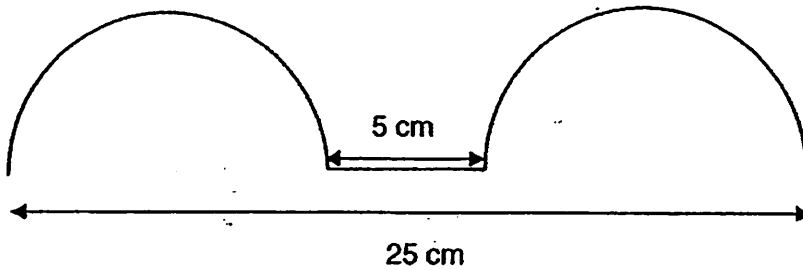
- 19 The figure below (not drawn to scale) is made up of 2 identical semi-circles and a square. The area of the square is 196 m^2 . What is the area of the figure?

(Take $\pi = \frac{22}{7}$)



Ans: _____ m^2

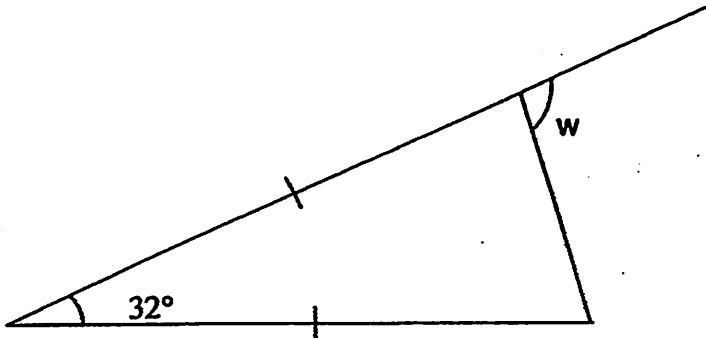
- 20 Amy bent a piece of wire to form the shape below. It consists of 2 identical semi-circles and a horizontal line. Find the length of the wire. (Take $\pi = 3.14$) (Figure is not drawn to scale)



Ans: _____ cm

Sub-total:

- 21 In the figure below (not drawn to scale), find value of $\angle w$.



Ans: _____°

- 22 Express $4\frac{3}{8}$ as a decimal.

Ans: _____

- 23 A cellphone costs \$540 before GST. If Ali has to pay 7% GST, how much does he have to pay altogether?

Ans: \$ _____

Sub-total:

- 24 For every 6 cupcakes Azra baked, she also baked 5 curry puffs. If she baked a total of 66 cupcakes and puffs, how many curry puffs did Azra bake?

Ans: _____

- 25 Debbie has 25% more hair pins than ribbons. If she has 36 ribbons, how many hairpins does Debbie have?

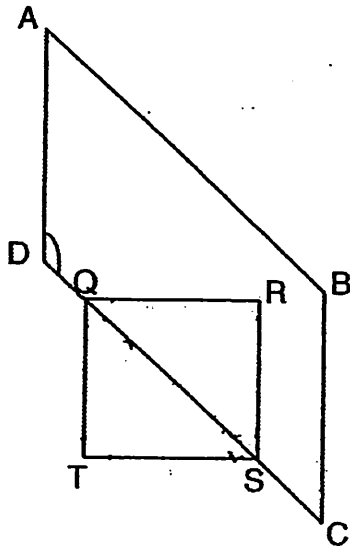
Ans: _____

Questions 26 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. (10 marks)

- 26 Vinod had 480 stickers. He gave $\frac{1}{6}$ to his sister and shared the rest equally with 3 other friends. How many stickers did each friend receive?

Ans: _____

- 27 In the figure below (not drawn to scale), ABCD is a parallelogram and QRST is a square. If $BC \parallel RS$, find $\angle ADQ$



Ans: _____°

28 The table below shows the rates of parking charges at a car park.

1 st hour	\$ 2
Every subsequent 5 minutes	\$ 0.10

If Mr Zhou paid \$3.30 for his parking fee, how long did he park his car at the car park?

Ans: _____ hr _____ min

29 There are 215 beads in a pouch. $\frac{1}{5}$ of them are red beads. $\frac{3}{4}$ of the remainder are green beads and the rest are blue beads. How many blue beads are there in the pouch?

Ans: _____

30 Dave and Hock Heng share 495 marbles in the ratio 8 : 3. How many more marbles does Dave have than Hock Heng?

Ans: _____

END OF PAPER

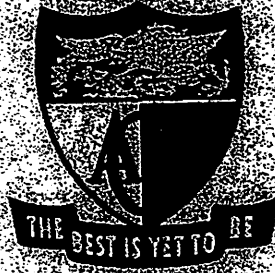
ACS (J) P6 MA SA1 2011

B 7

Sub-total:

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Anglo-Chinese School
(Junior)



SEMESTRAL ASSESSMENT 1 (2011)
PRIMARY 6

MATHEMATICS

PAPER 2

Thursday

12 May 2011

1 hr 40 min

INSTRUCTIONS TO PUPILS

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There are 18 questions in this booklet.

Answer ALL questions.

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Name: _____ ()

Class: 6 ()

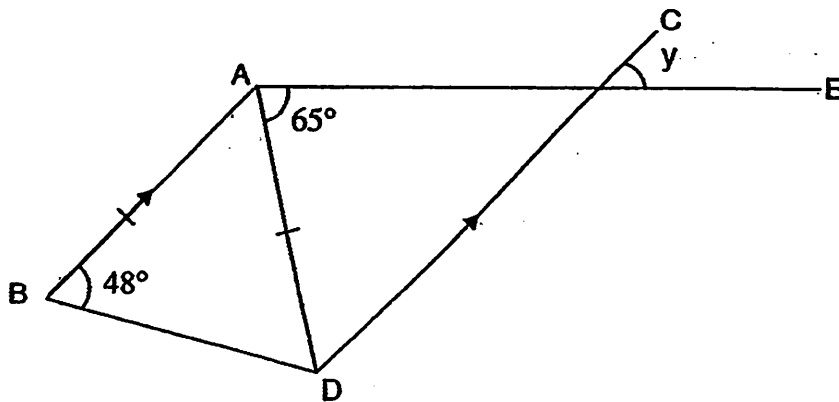
Parent's Signature: _____

Paper	Possible Marks	Marks Obtained
1	40	
2	60	
TOTAL	100	

This question paper consists of 14 printed pages. (Inclusive of cover page)

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

- 1 In the diagram below (not drawn to scale), $AB \parallel CD$ and $AB = AD$. Find $\angle y$



Ans: _____°

- 2 A jacket cost 4 times as much as a skirt. The skirt cost \$12.60 more than a shawl. If Susie paid \$171 for these 3 items, how much did the shawl cost?

Ans: \$ _____

--

- 3 Yazid took $\frac{2}{3}$ h to wrap 4 parcels. He spent an equal amount of time wrapping each parcel. At this rate, how long would it take Yazid to wrap 7 such parcels?

Ans: _____ min.

- 4 May received 55% of the votes of her class to become Class Captain. If May received 4 more votes than the other candidate, what was the total number of votes?

Ans: _____

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- 5 In an aquarium, there were 121 swordtails. The ratio of the number of male swordtails to the number of female swordtails was 4 : 7. A few days later, 33 swordtails died, $\frac{2}{3}$ of which were males. Express the ratio of the number of male swordtails to the number of female swordtails left in the aquarium. Give your answer in the simplest form.

Ans: _____

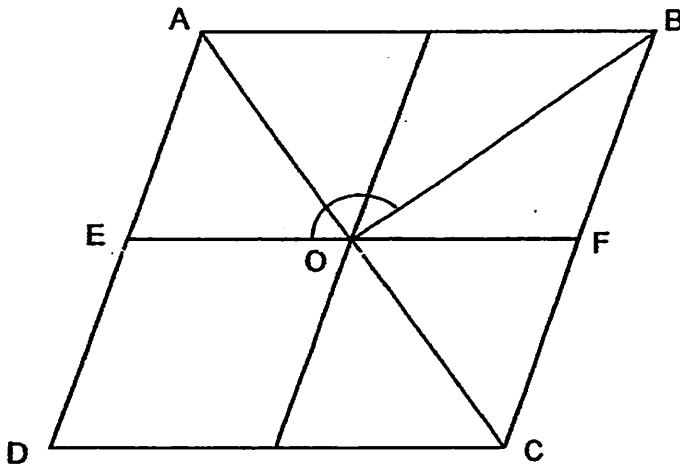
For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided.
 The number of marks available is shown in brackets [] at the end of each question or part-question. (50 marks)

- 6 The length of a rectangle is y cm. The ratio of its length to its breadth is $2 : 1$.
 a) What is the perimeter of the rectangle? (Give your answer in terms of y)
 b) Find the perimeter of the rectangle if $y = 24$ cm.

Ans: (a) _____ [2]

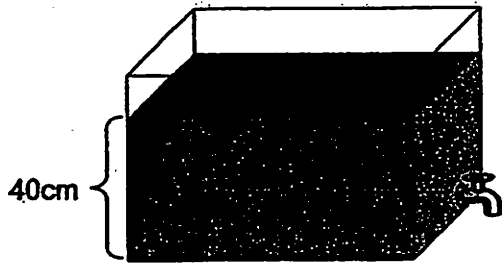
(b) _____ [1]

- 7 In the figure below (not drawn to scale), ABCD is made up of 4 identical rhombuses. Given that $AC = DC$, find $\angle EOB$



Ans: _____ [3]

- 8 A rectangular container, measuring 80cm by 50cm by 50cm, was filled with water to a depth of 40cm. The water was drained out for 14 minutes at a rate of 2ℓ per minute. What was the new height of the water level after 14 minutes?



Ans: _____ [3]

- 9 $\frac{6}{7}$ kg of prawns and 2 kg of minced meat cost \$52. $\frac{1}{3}$ kg of prawns and 1 kg of minced meat cost \$24. Find the cost of 1 kg of prawns.

Ans: _____ [3]

Sub-Total:

- 10 The number of members in a stamp-collectors club increased by 40% from March to April. However, the number of members dropped by 25% from April to May. If the difference in the number of members between March and May was 9, how many members were there in May?

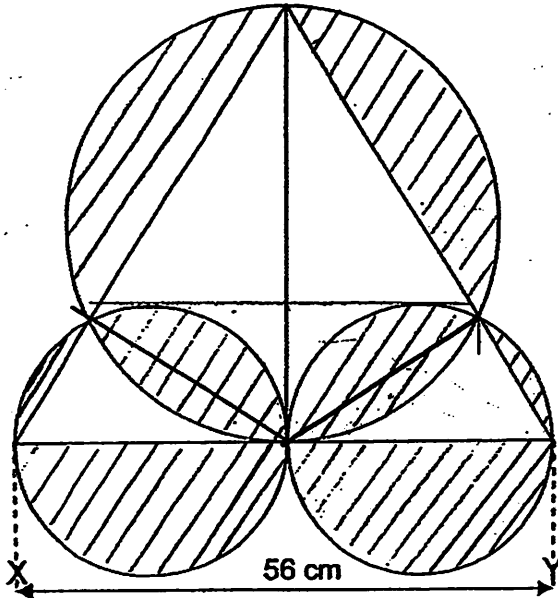
Ans: _____ [3]

- 11 Cindy has 650 hair bands, clips and ribbons altogether. The ratio of the number of hair bands to the number of clips is 7 : 5. If Cindy has 30 fewer ribbons than clips, how many hair bands does Cindy have?

Ans: _____ [3]

Sub-Total:

- 12 The figure below is made up of 1 large circle, 1 triangle and 2 small identical circles. The length of XY is 56 cm and the diameter of the large circle is 40 cm. Find the area of the shaded part. Round off your answer to 1 decimal place.



Ans: _____ [4]

13 Mr Tok left Town A for Town B at 11.30 am. He travelled at an average speed of 75km/h. At 12.15 pm, Ms Selva left Town A for Town B, travelling on the same route at an average speed of 100km/h.

- (a) At what time would Ms Selva overtake Mr Tok?
- (b) After Ms Selva had overtaken Mr Tok, she took another 2 hours to reach Town B. What was the distance between Town A and Town B?

Ans: (a) _____ [2]

(b) _____ [2]

Sub-Total:

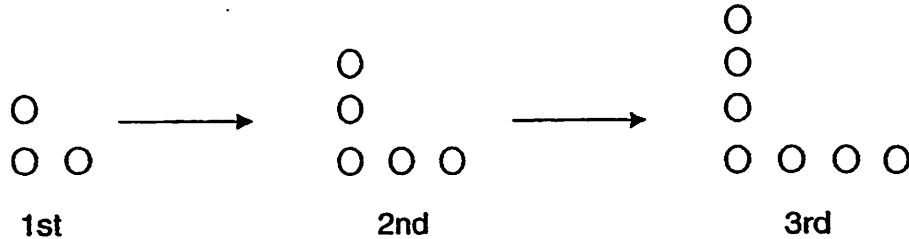
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- 14 Mrs Lee has 60 pencils to give to her class. If she gives each boy 2 pencils and each girl 3 pencils, she will have 6 pencils left over. However, if she gives each boy 3 pencils and each girl 2 pencils, she will have 4 pencils left over. How many pupils are there in Mrs Lee's class?

Ans: _____ [4]

Sub-Total:

- 15 David used coins to form a series of L-shaped patterns. The first three patterns are shown below.



- (a) Complete the table below.

L-shaped pattern.	Number of coins
1 st	3
2 nd	5
3 rd	7
4 th	
5 th	
6 th	

[1]

- (b) Write down the number of coins that David would need to form the 100th pattern?
- (c) A pattern is formed with 601 coins. Which pattern would it be?

Ans: (b) _____ [2]

(c) _____ [2]

16 There were an equal number of boys and girls at a funfair. After $\frac{1}{3}$ of the boys and $\frac{2}{9}$ of the girls left the funfair, there were 25 more girls than boys remaining behind.

(a) How many boys were there at the funfair at first?

(b) Later 165 more children turned up at the funfair. Then there were $\frac{3}{4}$ as many boys as girls. What was the total number of girls present at the funfair at the end?

Ans: (a) _____ [2]

(b) _____ [3]

Sub-Total:

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17 Daphne had 20% fewer books than Jocelyn. Yan Ming had 8 more books than Jocelyn. If Jocelyn were to give 4 books to Daphne, they would both have an equal number of books.

(a) How many books did the 3 girls have altogether?

(b) Yan Ming went to buy some new books. The ratio of books that Yan Ming had to the ratio that Jocelyn had then became 3 : 2. How many new books did Yan Ming buy?

Ans: (a) _____ [2]

(b) _____ [3]

18 The ratio of the number of ducks to the number of geese on Farmer Zhou's farm was 5 : 6. When Farmer Zhou acquired 242 more ducks, there was an overall increase of 40% of the total number of ducks and geese he had at first.

(a) How many ducks and geese were there on Farmer Zhou's farm at the end?

(b) What was the percentage increase in the number of ducks on Farmer Zhou's farm?

Ans: (a) _____ [3]

(b) _____ [2]

END OF PAPER

Sub-Total:

ANSWER SHEET

EXAM PAPER 2011

SCHOOL : ACS (JUNIOR)
 SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA1

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

- | | | | | |
|---------|--------------|-------------|----------------------|-----------|
| 16)9 | 17)2hr 39min | 18)\$53 | 19)350m ² | 20)36.4cm |
| 21)106° | 22)4.375 | 23)\$577.80 | 24)30 | 25)45 |
| 26)100 | 27)135° | 28)2h 5min | 29)43 | 30)225 |

PAPER 2

- | | |
|---|---|
| <p>1) $48^\circ + 48^\circ = 96^\circ$
 $180^\circ - 96^\circ = 84^\circ$
 $180^\circ - 65^\circ - 84^\circ = 31^\circ$</p> <p>3) 4 parcels → 40min
 1 parcel → 10min
 7 parcels → 70min</p> <p>5) 1:3</p> <p>7) $60^\circ + 60^\circ + 30^\circ = 150^\circ$</p> <p>9) $6/7 = 18/21$ $1/3 = 7/21$
 $18/21p + 2m = \\$52$
 $7/21p + 1m = \\$24$ } x2
 $14/21p + 2m = \\$48$ }
 $4/21p = \\$52 - \\$48 = \\$4$
 $21 \div 4 = 5.25$
 $\\$4 \times 5.25 = \\21</p> | <p>2) $6u \rightarrow \\$17 + \\$12.60 = \\$183.60$
 $1u \rightarrow \\$183.60 \div 6 = \\30.60
 $SH \rightarrow \\$30.60 - \\$12.60 = \\$18$</p> <p>4) 55% → 11/20
 $1 - 11/20 = 9/20$
 $11/20 - 9/20 = 2/20$
 $2/20 \rightarrow 4$
 $20/20 \rightarrow 4 \times 10 = 40$</p> <p>6) a) $y + y + \frac{1}{2}y + \frac{1}{2}y = 3y$
 b) $y = 24$
 $3y = 24 \times 3 = 72\text{cm}$</p> <p>8) $80\text{cm} \times 50\text{cm} \times 40\text{cm} = 16000\text{cm}^3$
 $2L = 2000\text{cm}^3$
 $14 \times 2000\text{cm}^3 = 28000\text{cm}^3$
 $16000\text{cm}^3 - 28000\text{cm}^3 = 132000\text{cm}^3$
 $132000\text{cm}^3 \div 80\text{cm} \div 50\text{cm} = 33\text{cm}$</p> <p>10) March = 100%
 April = 140%
 $\text{May} = 75/100 \times 140/1 = 105\%$
 5% → 9
 $105\% \rightarrow 9/5 \times 105/1 = 189$</p> |
|---|---|

11) $650 + 30 = 680$
 $17u \rightarrow 680$
 $1u \rightarrow 680 \div 17 = 40$
 $hb \rightarrow 40 \times 7 = 280$

12) Triangle $\rightarrow \frac{1}{2} \times 56\text{cm} \times 40\text{cm} = 1120\text{cm}^2$
 $56\text{cm} \div 4 = 14\text{cm}$
 Small circle $\rightarrow 14\text{cm} \times 14\text{cm} \times \Pi = 196\Pi\text{cm}^2$
 2 small circles $\rightarrow 196\Pi \times 2 = 392\Pi\text{cm}^2$
 $40\text{cm} \div 2 = 20\text{cm}$
 $20\text{cm} \times 20\text{cm} \times \Pi = 400\Pi\text{cm}^2$
 Total area $\rightarrow 392\Pi\text{cm}^2 + 400\Pi\text{cm}^2 = 792\Pi\text{cm}^2$
 Shaded area $= 792\Pi\text{cm}^2 - 1120 = 1368.1\text{cm}^2$

13) a) $75\text{km/h} \times \frac{3}{4} = 56.25\text{km}$
 $100\text{km/h} - 74\text{km/h} = 25\text{km/h}$
 $56.25\text{km} \div 25\text{km/h} = 2.25\text{h} = 2\frac{1}{4}\text{h}$
 $12.15\text{pm} \xrightarrow{2\frac{1}{4}\text{h}} \text{-----} 2.30\text{pm}$
 b) $2\frac{1}{4} + 2\text{h} = 4\frac{1}{4}\text{h}$
 $4\frac{1}{4}\text{h} \times 100\text{km/h} = 425\text{km}$

14) $2B + 3g = 60 - 6 = 54$
 $3B + 2g = 60 - 4 = 56$
 $4B + 6g = 54 \times 2 = 108$
 $9B + 6g = 56 \times 3 = 168$
 $9B - 4B = 168 - 108$
 $5B = 60$
 $1B = 60 \div 5 = 12$
 $3g = 54 - 24 = 30$
 $1g = 30 \div 3 = 10$
 $10 + 12 = 22 \text{ pupils}$

15) a) 9, 11, 13
 b) $2 \times 100 + 1 = 201$
 c) $601 - 1 = 600$
 $600 \div 2 = 300$

16) a) $1u \rightarrow 25$
 $9u \rightarrow 25 \times 9 = 225$
 b) $13u \rightarrow 25 \times 13 = 325$
 $325 + 165 = 490$
 $3p + 4p = 7p$
 $7p \rightarrow 490$
 $1p \rightarrow 490 \div 7 = 70$
 $4p \rightarrow 70 \times 4 = 280$

17) a) $J = 100\%$
 $D = 80\%$
 $Y = 100\% + 8$
 $100 - 80 = 20$
 $20 \div 2 = 10$
 $10\% \rightarrow 4$
 $280\% \rightarrow 4/10 \times 280/1 = 112$
 $112 + 8 = 120$
 b) $J = 100\% = 4/10 \times 100/1 = 40$
 $Y = 40 + 8 = 48$
 $Y : J$
 $3 : 2$
 $2u \rightarrow 40$
 $1u \rightarrow 40/2 = 20$
 $3u \rightarrow 20 \times 3 = 60$
 $60 - 48 = 12$

18) a) $40\% \rightarrow 242$
 $20\% \rightarrow 121$
 $140\$ \rightarrow 121 \times 7 = 847$
 b) $5 + 6 = 11$
 $11/5 \times 7 = 15.4$
 $15.4 = 9.4$
 $9.4 - 5 = 4.4$
 $4.4/5 \times 100\% = 88\%$