RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 1
2010
Paper 1

Name : _____ ( ) Class: P6__
Math Class: P6__

11 May 2010 MATHEMATICS Att: 50 min

Your Score Out of **40** marks		
	Math Class	**Level**
Highest score		
Average score		
Parent's Signature		

SECTION A (20 marks)

Questions 1 to 10 carry 1 mark each. Question 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 your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.
No calculators may be used for this paper.

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1. Round off 75 518 to the nearest ten thousands.

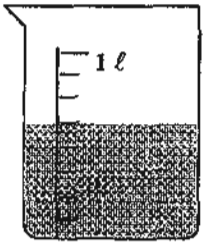
(1) 70 000
(2) 75 000
(3) 76 000
(4) 80 000

2. What is the missing number in the box?

$$\frac{12}{18} = \frac{\square}{12}$$

(1) 18
(2) 8
(3) 6
(4) 4

3. What is the volume of the water in the beaker?



(1) 500 mℓ
(2) 525 mℓ
(3) 625 mℓ
(4) 700 mℓ

4. Find the value of $9p - 6 - 2p + 16$ given that $p = 4$.

(1) 6
(2) 38
(3) 50
(4) 68

5. Kelly's weight is $\frac{5}{7}$ of Bob's weight. Tom's weight is $\frac{3}{5}$ of Kelly's weight.

What is the ratio of Kelly's weight to Bob's weight to Tom's weight?

(1) 5 : 7 : 3
(2) 7 : 5 : 3
(3) 3 : 5 : 7
(4) 5 : 3 : 7

6. Each packet of beads weighed $\frac{2}{5}$ kg.
What was the total mass of 4 such packets of beads?

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

(2) $1\frac{1}{5}$ kg

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

(4) $4\frac{2}{5}$ kg

7. Express 0.65 as a fraction in the simplest form.

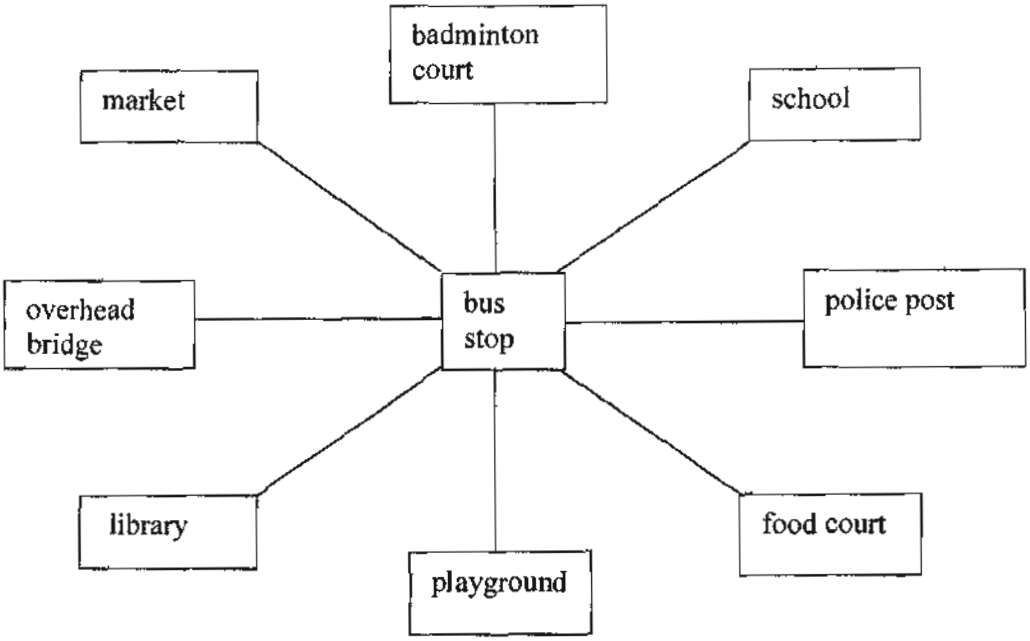
(1) $\frac{13}{100}$

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

(3) $\frac{13}{20}$

(4) $\frac{65}{100}$

8. John is at the bus stop now. If he turns 225° clockwise, he will be facing the police post. Where is John facing now?



(1) library
(2) market
(3) school
(4) food court

9. The average of 3 numbers is 5r.
The first number is 2r.
The second number is 4.
Find the third number in terms of r in the simplest form.

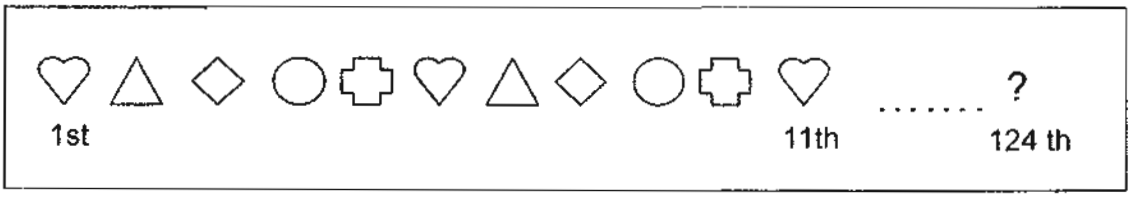
(1) 3r – 4
(2) 7r + 4
(3) 13r – 4
(4) 17r + 4

>

10. Express \$1 as a percentage of 25-cents.

(1) 400%
(2) 25%
(3) 20%
(4) 4%

11. Cards of five different shapes are used to make a pattern.
The first 11 cards are shown below.
What is the shape of the 124^{th} card?

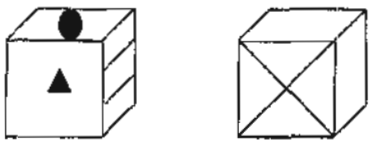


(1) △
(2) ◇
(3) ○
(4) ✚

12. I have \$1.20 in my pocket in 10-cent coins and 20-cent coins. Given that I have a total of 8 coins in my pocket, how many 10-cent coins do I have?

(1) 8
(2) 2
(3) 6
(4) 4

13. The figure below shows two identical cubes.



Which face is opposite  ?

(1) 

(2) 

(3) 

(4) 

14. Express $\frac{1}{2}$ % as a fraction.

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

(2) $\frac{1}{20}$

(3) $\frac{1}{200}$

(4) $\frac{1}{2000}$

15. From her home, Joanne walked $\frac{1}{4}$ of the distance to school and cycled the remaining distance. She took 11 minutes for the whole journey.
When she cycled the full distance to school, she took 4 minutes.
How long will Joanne take if she walks the full distance to school?
(Assume that she walked at a constant speed and cycled at a constant speed.)

(1) 22 minutes
(2) 26 minutes
(3) 30 minutes
(4) 32 minutes

SECTION B (20 marks)

Questions 16 to 25 carry 1 mark each. Questions 26 to 30 carry 2 marks each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

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16. Arrange the numbers in descending order.

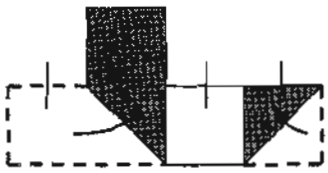
46 004, 46 014, 46 104, 46 010

Ans: _____

17. Find the value of $20 - (18 + 12) \times 2 \div 4$.

Ans: _____

18. A rectangular piece of paper was painted black on one side and white on the other side. The paper was folded as shown below.
What fraction of the paper was painted black and cannot be seen?



Ans: _____

19. Sarah made $1\frac{1}{3}$ *l* of orange juice. She drank $\frac{3}{4}$ *l* of it.
How many litres of orange juice did she have left?
Express your answer in its simplest form.

Ans: _____ *l*

20. Express $\frac{5}{6}$ as a decimal.

Round off your answer to 2 decimal places.

Ans: _____

21. Convert 2 km to cm.

Ans: _____cm

22. In the number line below, X represents $\frac{1}{10}$ and Z represents $\frac{1}{2}$.
Given XY = YZ, what does Y represent?

Leave your answer as a decimal.

Ans: _____

23. Mrs Wong had $w. She gave $12 to her daughter and divided the remainder equally among her two sons. How much did each of her sons get?

Ans. $_____

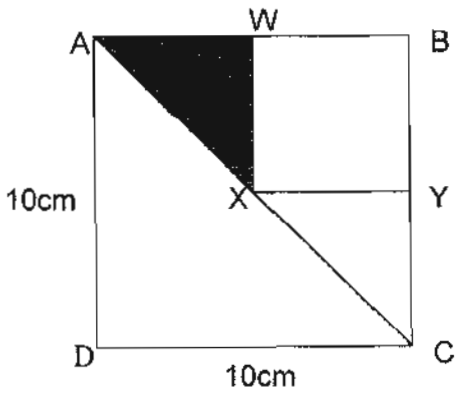
24. The average of three numbers written on the piece of paper was 32.
Two digits of two of the numbers were stained.
What was the number in the middle?

Ans: _____

25. A plane took off at 12.20 a.m. and arrived at the destination at 3.00 p.m. the same day. How long was the flight?

Ans: _____ h

26. ABCD is a square of side 10 cm.
WXYB is also a square.
Find the area of the shaded triangle.



Ans: _____ cm^2

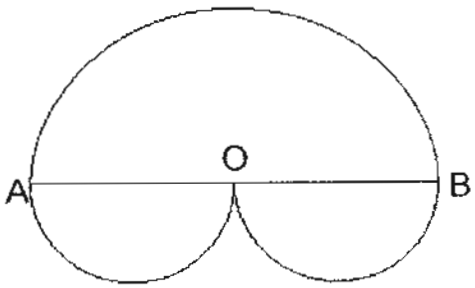
27. Mrs Hanks baked 143 muffins in the morning and twice as many muffins in the afternoon.
She packed all of them into boxes that could hold a maximum of 12 muffins.
How many boxes did she use?

Ans: _____

28. A box can either hold 180 bricks or 220 cubes.
When 108 bricks are in the box, what is the maximum number of cubes that can be put into the box?

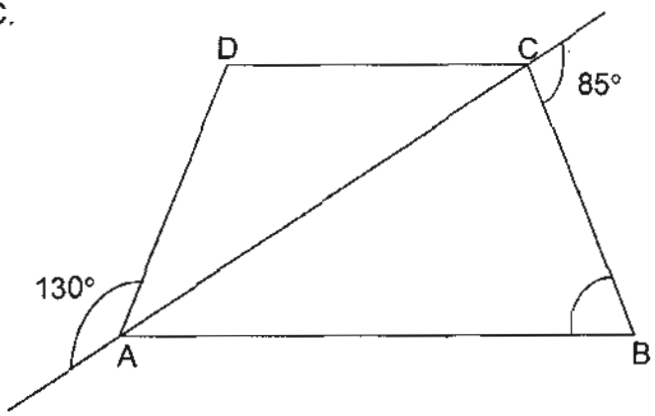
Ans: _____

29. The figure below, not drawn to scale, is made up of 3 semicircles.
O is the centre of the figure. AB is a straight line measuring 20 cm.
Find the area of the figure in terms of π.



Ans: _____ cm^2

30. The figure below is not drawn to scale. AB // DC and AD = CD.
AC is a straight line. Find ∠ABC.



Ans: _____°

-End of Paper-

Please check your work carefully ☺

Setters: A. Ong, Lee S.K., Yan Y L

RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 1
2010
Paper 2

Name : _____ ( ) Class: P6__
Math Class: P6__

11 May 2010 MATHEMATICS Att: 1 h 40 min

Your Score Out of **60** marks		
	Math Class	**Level**
Highest score		
Average score		
Parent's Signature		

For question 1 to 5 carry 2 marks each.
Show your working clearly in the space provided for each question and write your answer in the spaces provided. Answers in fractions or ratio must be expressed in the simplest form.

All diagrams are not drawn to scale.
Marks will be awarded for relevant working. The number of marks available is shown in brackets [ ] at the end of each question or part-question.
Calculators can be used.

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1. The original price of a blouse was $45. After getting a discount, Mrs Lee paid $36. Find the percentage discount.

Ans: _____% [2]

2. The breadth of a rectangle is 2y cm. Its length is 6 times its breadth. Find the perimeter of the rectangle in terms of y.

Ans: _____cm [2]

3. Jack and Ken ran in a marathon covering 42 km.
When Jack completed the distance in 5 hours, Ken only covered $\frac{5}{6}$ of the distance. Find the average speed of Ken.

Ans: _____km/h [2]

4. Basket A and B have an equal number of marbles.
The number of blue marbles in basket A is $\frac{3}{5}$ of the number of blue marbles in basket B.
The number of red marbles in basket B is $\frac{3}{7}$ of the number of red marbles in basket A.

What is the ratio of the number of blue marbles to the number of red marbles in basket B?

Ans: _____ [2]

5. $\frac{2}{5}$ of 80 km is the same as _____% of 320 km.

Ans: _____ [2]

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers with the correct units in the spaces provided.

The number of marks available is shown in brackets [ ] at the end of each question or part-question.

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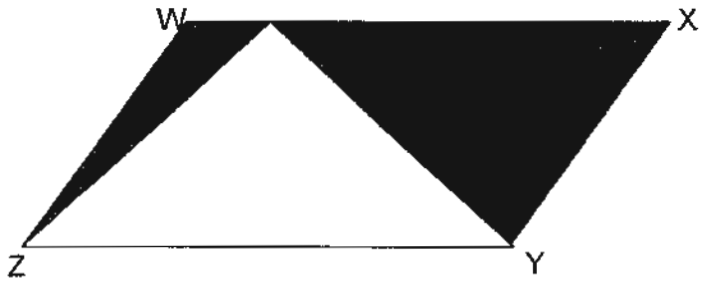
6. WXYZ is a parallelogram.



(a) What fraction of the figure is shaded?

(b) If the area of the figure is 256cm^2, what is the area of the shaded part?

Ans: a)_____ [1]

b) _____ [2]

7. Siti is thrice as heavy as Ali. Ben is twice as heavy as Siti.
Ben is $(70 - u)$ kg heavier than Ali. What is Ali's mass in terms of u?

Ans: _____ [3]

8. Observe the patterns carefully.

Pattern 1 Pattern 2 Pattern 3 Pattern 4

a) How many dots are there in Pattern 5?

b) Which pattern in the series has 1052 dots?

Ans: a)_____ [1]

b) _____ [2]

9. There are some 10-cent coins and 50-cent coins in the piggy bank.
The amount of money in the box is $3.40.
If the number of 10-cent coins is less than 5, find the total number of coins in the piggy bank.

Ans: _____ [3]

10. The area of a triangle with a base of 10 cm is the same as the area of a circle of radius 5 cm. Find the height of the triangle.
Leave your answer in terms of π.

Ans: _____ [3]

11. John had a sum of money. On Monday, he spent 25% of his money.
On Tuesday he spent $\frac{1}{3}$ of his money.
On Wednesday, he spent 25% of what he spent on Monday and Tuesday.
If he had $39 left, how much did he have at first?

Ans: _____ [3]

12. Mrs Tan had $\frac{4}{7}$ of her pencils left after selling 567 of them at \$0.70 each. She sold $\frac{2}{3}$ of the remainder at \$0.30 each. How much did she receive from the sales of the pencils?

Ans: _____ [5]

13. After saving for a month, $\frac{1}{5}$ of Heidi's savings was equal to $\frac{3}{7}$ of Joseph's savings.

After Heidi spent \$356 and Joseph saved an additional \$428, they had an equal amount of money in their savings.

How much did Heidi and Joseph save altogether in the end?

Ans: _____ [4]

14. Andy, Weizhi and Peter had a total of \$4582. After Andy had given $\frac{2}{5}$ of his share to Weizhi, Weizhi then gave \$55 to Peter.

As a result, the amount of money Peter had to the amount of money Andy had was in the ratio of 1 : 3.

If Weizhi had \$725 at first, find the amount of money Andy had at first.

Ans: _____ [4]

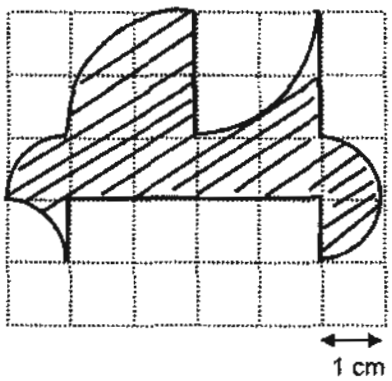
15. The figure below is drawn on square grids.

a) Find the area of the shaded figure.

Round off your answers to 2 decimal places.

b) Find the perimeter of the shaded figure.

Leave your answer in terms of π.



Ans: a) _____ [3]

b) _____ [2]

16. The number of balls in Box A is $\frac{1}{2}$ of the number of balls in Box B.

10% of the balls in Box A and 10% of the balls in Box B was moved to Box C.
As a result, the number of balls in Box C increased by 20%.
There are 72 balls in Box C now.
How many balls were there in Box B at first?

Ans: _____ [5]

27

17. Denise, Ginny and Florence each made some bookmarks for sale.
At first, Denise had 1 365 bookmarks more than Ginny.
Then Denise sold 420 bookmarks and made another 175 bookmarks.
Florence sold 140 bookmarks and made another 350 bookmarks.
Ginny made some more bookmarks and her number of bookmarks doubled.
In the end, all the three girls had the same number of bookmarks.
Find the total number of bookmarks the three girls had at first.

Ans: _____ [4]

18. Sarah started driving from Town A to Town B at 4.30 a.m. travelling at constant speed. James left Town A for Town B three hours later than Sarah travelling at a constant speed of 120 km/h.
When James arrived at Town B, Sarah was still 160 km away from Town B. Two hours later, Sarah reached Town B.

(a) Calculate Sarah's average speed.

(b) What time did James overtake Sarah?

Ans: a) _____ [1]

b) _____ [4]

-End of Paper-

Please check your work carefully ☺

Setters. A. Ong, Lee S.K. Yan Y.L

P6 SA1 Answer Key Maths

Paper 1

Section A

1 mark each

1	4	**6**	3
2	2	**7**	3
3	3	**8**	1
4	2	**9**	3
5	1	**10**	1

2 marks each

11	3
12	4
13	3
14	3
15	4

Section B

1 mark each

16	46104, 46014, 46010, 46004	**21**	200 000
17	5	**22**	0.3
18	$\frac{1}{2}$	**23**	$\frac{w-12}{2}$ or $\frac{w}{2}-6$
19	$\frac{7}{12}$	**24**	21
20	0.83	**25**	$14\frac{2}{3}$

2 marks each

26) $\frac{1}{2}$ x 5 x 5 = 12.5 [M1, A1]

OR

100 ÷ 8 = 12.5 [M1, A1]

27) Morning 143
Afternoon 143 x 2 = 286
429 ÷ 12 = 35 R 9 ≈ 36 [M1, A1]

OR

143 x 3 = 429
429 ÷12 = 35 r 9 [M1, A1]

28) 1 box → 180 bricks

$\frac{108}{180} = \frac{3}{5}$ of box occupied, $\frac{2}{5}$ available

$\frac{2}{5}$ x 220 = 88 [M1, A1]

29) $(\frac{1}{2} \times \pi \times 10 \times 10) + (\pi \times 5 \times 5) = 75\pi$ [M1, A1]

30) DAC = ∠DCA = 180° - 130° = 50° [M1]

∠ACB = 180° - 85° = 95°

∠ABC = 180° - 95° - 50° = 35° [A1]

Paper 2

1) 45 – 36 = 9

$\frac{9}{45} \times 100 = 20$ [M1, A1]

Ans: 20%

2) 2y x 6 = 12y [M1]

2y + 2y + 12y+ 12y = 28y [A1]

Ans: 28y cm

3) Ken: $\frac{5}{6}$ of distance → 5 hours

Complete: 6 hours

Speed = $\frac{Distance}{Time} = \frac{42}{6}$ = 7 (km/h) [M1, A1]

Ans: 7km/h

4)

	A : B			A : B	
Blue	3 : 5	×2 →	Blue	6 : 10	[M1, A1]
Red	7 : 3		Red	7 : 3	
			Total	(13) : (13)	

Ans: 10 : 3

5) $\frac{2}{5}$ x 80 km = 32 km [M1]

$\frac{32}{320}$ x 100% = 10% [A1]

Ans: 10%

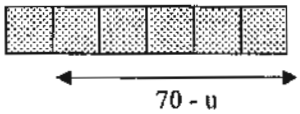
6a) Ans: $\frac{1}{2}$

6b) 256 ÷ 2 = 128 [M1, A1]

Ans: 128 cm^2

7) Siti 

Ali 

Ben 

6u – u = 5u [M1]

5u → 70 – u

u → $\frac{70-u}{5}$ [M1, A1]

Ans: $(\frac{70-u}{5})$ kg

8a) Ans: 17 [A1]

b) Pattern number x 3 + 2 = 1 052

1 052 – 2 = 1 050

1 050 ÷ 3 = 350 [M1, A1]

Ans: 350

9) $4 \times 0.1 + 6 \times 0.5 = 3.40$ [M1]
$6 + 4 = 10$ [M1, A1]

Ans: 10

10) $\pi \times 5 \times 5 = 25\pi$ [M1]
$25\pi \times 2 \div 10 = 5\pi$ [M1, A1]

Ans: 5π cm

11) $\frac{1}{4} + \frac{1}{3} = \frac{7}{12}$

$\frac{1}{4} \times \frac{7}{12} = \frac{7}{48}$

$1 - \frac{7}{12} - \frac{7}{48} = \frac{13}{48}$ [M1]

$\frac{13}{48} \rightarrow 39$

$1 \rightarrow 39 \times 48 \div 13 = 144$ [M1,A1]

Ans: $144

12) **Method 1**

$567 \times 0.7 = 396.9$	[M1]
$567 \div 3 \times 4 = 756$	[M1]
$\frac{2}{3} \times 756 = 504$	[M1]
$504 \times 0.3 = 151.2$	[M1]
$151.20 + 396.90 = 548.10$	[A1]
Ans: $548.10	

Method 2

$567 \times 0.7 = 396.9$	[M1]
$\frac{2}{3} \times \frac{4}{7} = \frac{8}{21}$ ($0.30 each)	

$\frac{9}{21}$ → 567

$\frac{1}{21}$ → 567 ÷ 9 = 63 [M1]

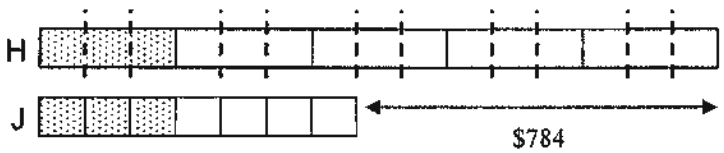
$\frac{8}{21}$ → 63 x 8 = 504 [M1]

504 x 0.3 = 151.2 [M1]

151.20 + 396.90 = 548.10 [A1]

Ans: $548.10

13)



$\frac{1}{5} = \frac{3}{15}$

15u – 7u = 8u

8u → $356 + $428 = $784

1u → $784 ÷ 8 = $98 [M1]

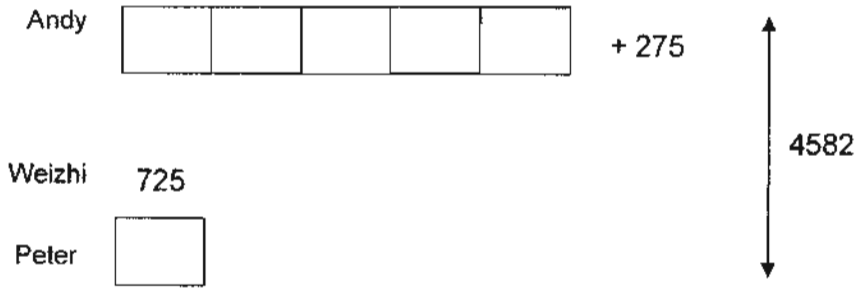
15u + 7u = 22u

22u → $98 x 22 = $2 156 [M1]

$2 156 – $356 + $428 = $2 228 [M1, A1]

Ans: $2 228

14)



Method 1

$4582 – $725 = $3857
$3857 – (55 × 5) = $3582 [M1]
$3582 ÷ 6 =$597 [M1]
$597 +$55 = $652 [M1]
$652 × 5 = $3260 [A1]

Ans: $3260

Method 2

$4582 – $725 = $3857
$3857 – (55 × 5) = $3582 [M1]
$3582 ÷ 6 =$597 [M1]
$597 × 5 = $2985
$2985 + $275 = $3260 [M1, A1]

Ans: $3260

Method 3

$4582 – $725 = $3857
$3857 + $55 = $3912 [M1]
$3912 ÷ 6 =$652 [M1]
$652 × 5 = $3260 [M1, A1]

15a) $2 \times 2 = 4$
$1 \times 1 = 1$
$4 \times 1 = 4$
$\frac{1}{2} \times \pi \times 1\text{ cm} \times 1\text{ cm} = 1.571\text{ cm}^2$ [M1]

$(4 + 1 + 4 + 1.571)\text{ cm}^2 = 10.571\text{ cm}^2 \approx 10.57\text{ cm}^2$ [M1, A1]

Ans: 10.57 cm^2

15b) $\pi \times 2 = 2\pi$
$\frac{1}{2} \times \pi \times 4 = 2\pi$

$10 + 2\pi + 2\pi = 10 + 4\pi$ [M1, A1]

Ans: $(10 + 4\pi)$ cm

16) **Method 1**

120% → 72 [M1]
100% → 100 x 72 ÷ 120 = 60
72 – 60 = 12 [M1]
12 ÷ 3 x 2 = 8 [M1]
10% → 8
100% → 8 x 10 = 80 [M1, A1]
Ans: 80

Method 2

	A	B	
	10u	20u	
-u			-2u
	9u	18u	

3u → 20%
18u → 120% [M1,A1]

18u → 72
u → 4 [M1,A1]
20u → 80 [A1]

Ans: 80

17)

D | 1 120* | 245 | Sold 420 & made 175 → - 245

F | 910 | 210 | 1120 + 140 – 350 = 910

G

Method 1

420 –175 = 245
1 unit → 1 365 – 245 = 1 120 [M1]
1120 + 140 – 350 = 910 [M1]
3 units → 3 x 1 120 = 3 360 [M1]
3 360 + 1 120 + 245 + 910 = 5635 [A1]

Ans: 5635

Method 2

420 –175 = 245
1 unit → 1 365 – 245 = 1 120 [M1]
4 units → 4 x 1 120 = 4480 [M1]
4480 + 245 + 910 = 5635 [M1, A1]

Ans: 5635

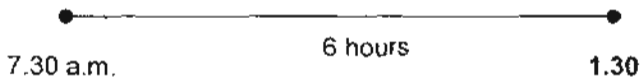
Method 3

420 –175 = 245
1 unit → 1 365 – 245 = 1 120(Ginny) [M1]
1120 + 1365 = 2485 (Denise) [M1]
1120 + 910 = 2030 (Florence)
1120 + 2485 + 2030 = 5635 [M1, A1]
Ans: 5635

18a) Sarah's speed → 160 ÷ 2 = 80 [A1]

Ans: 80 km/h

18b) Dist. by Sarah in 3 hours → 80 km x 3 = 240 km [M1]
Diff. in speed → 120 – 80 = 40 [M1]
Hours required to catch up with Sarah → 240 ÷ 40 = 6 [M1]



(a) Ans: 1330 /1.30pm [A1]