Anglo-Chinese School (Primary)

MID-YEAR EXAMINATION 2014
MATHEMATICS
PAPER 1 (BOOKLET A)
PRIMARY SIX

Name: _____ (   )   Class: Primary 6 ___

Date: 9 May 2014   Duration of Booklets A & B: 50 min

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 7 printed pages, including the cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Shade your answers on the Optical Answer Sheet (OAS) provided.
5. You are <u>not</u> allowed to use a calculator.

1.   6 hundreds, 8 tenths and 2 thousandths is _____.

   1)   680.002
   2)   600.802
   3)   600.280
   4)   600.082

2.   Keith weighs 30 kg. He weighs $\frac{5}{6}$ of his sister's mass. Find his sister's mass.

   1)   6 kg
   2)   25 kg
   3)   36 kg
   4)   66 kg

3.   Derrick, Eugene and Fay share 25 sweets. Derrick gets n sweets less than Eugene and Fay gets $2n$ sweets less than Eugene. How many sweets does Fay get?

   1)   25 - 3n
   2)   25 - 2n
   3) $(\frac{25-2n}{3})$
   4) $(\frac{25-3n}{3})$

4. Alan is paid $48 for working 8 hours. At this rate, how many hours must he work to earn $576?

   1) 12

   2) 72

   3) 78

   4) 96

5. The table below shows the charges for bicycle rental at the Blue Coast Park.

Bicycle for Rental at the Blue Coast Park	
For the first hour	$3.00
For every additional $\frac{1}{2}$- hour or part thereof	$1.20

David rented a bicycle from 9 a.m. to 12.30 p.m. How much did he pay?

   1) $4.20

   2) $9

   3) $10.20

   4) $12

6. John took 3 hours and 45 minutes to travel from Town A to Town B. He reached Town B at 2.05 p.m. What time did he leave Town A?

   1) 10.20 a.m.
   2) 11.05 a.m.
   3) 1.40 p.m.
   4) 5.50 p.m.

7. A water tank was $\frac{2}{5}$ full. When another 800 cm³ of water was poured into the tank, it became $\frac{2}{3}$ full. Find the capacity of the tank.

   1) 400
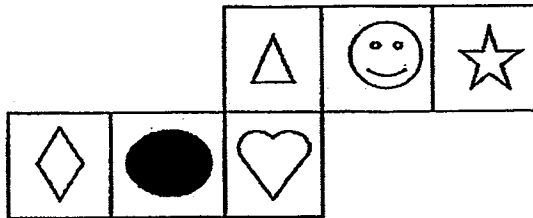   2) 600
   3) 2 000
   4) 3 000

8. Which square must be shaded so that the figure has a line of symmetry?

A

B

D   C

   1) A
   2) B
   3) C
   4) D

4
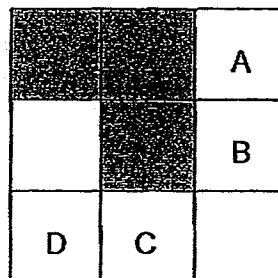
9. The figure below shows a cube and its net. Each face of the cube has been labelled on the net. Which face is opposite face ☺?

|	△	☺	☆
◇	●	♡	

1) ◇

2) ●

3) ♡

4) △

10. Mr Lee travelled at an average speed of 90 km/h from Town A to Town B. It took him 3 hours to complete his journey. How long would it take Mr Lee to complete the same journey if he decreased his speed by 30 km/h?

1) 1.5 h
2) 4.5 h
3) 7.5 h
4) 9 h

5

11. Sarah spent an equal amount of money on 7 pencils and 9 erasers. Each pencil costs 20 cents more than an eraser. How much did Sarah spend altogether?

   1) $4.90
   2) $6.30
   3) $11.20
   4) $12.60

12. The average savings of 3 girls, Clara, Dolly and Eunice was $220. Clara had $60 more than Dolly. The total savings of Clara and Dolly was the same as the savings of Eunice. What was Clara's savings?

   1) $135
   2) $195
   3) $240
   4) $300

13. Darius had 220 stamps in his collection of which 25% were from Singapore. How many Singapore stamps must his sister give him to increase the number of Singapore stamps in his collection to 45%?

   1) 30
   2) 55
   3) 80
   4) 99

14. The figure below, not drawn to scale, is made up of three identical quarter circles of radii 12 cm. Find its area in terms of π.
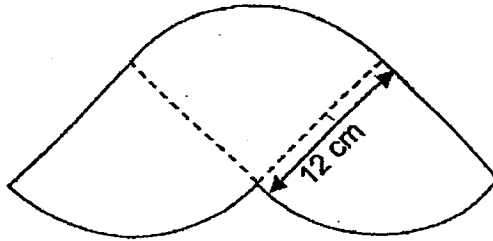
1) $(18\pi + 22)\ cm^2$

2) $(24\pi + 22)\ cm^2$

3) $(108\pi)\ cm^2$

4) $(144\pi)\ cm^2$

15. Last year, the ratio of the number of boys to the number of girls in a reading club was 2 : 3. This year, 30 girls join the club and the ratio of boys to girls is now 4 : 9. How many members were there in the reading club last year?

1) 15

2) 26

3) 100

4) 130

Anglo-Chinese School (Primary)

MID-YEAR EXAMINATION 2014
MATHEMATICS
PAPER 1 (BOOKLET B)
PRIMARY SIX

Name: _____ ( )   Class: Primary 6 ___

Date: 9 May 2014   Duration of Paper Booklets A & B: 50 min

_____
Parent's/Guardian's signature

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 7 printed pages, including the cover page.
2. Do not turn this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. You are not allowed to use a calculator.

Section	Maximum Marks	Marks Obtained
Paper 1 Booklet A. Multiple-Choice Questions	20	
Paper 1 Booklet B. Short Answers: Part 1	10	
Paper 1 Booklet B. Short Answers: Part 2	10	
Total Marks	40	

Questions **16** to **25** carry 1 mark each. Write your answers in the spaces provided. Give your answers to the units stated and to its simplest form whenever necessary. **(10 marks)**

16.   A photocopier can print 40 pages in 30 seconds. How long does it take to print 280 pages? Express your answer in minutes.

Answer: _____ min

17.   During the Chinese New Year promotion at the Bird Park, every 7th visitor was given a free admission ticket. How many free admission tickets were given to a group of 80 visitors?

Answer: _____

18.   Biscuit tins in XYZ supermarket were arranged on 20 shelves with an equal number of biscuit tins on each shelf. 4 shelves were removed and the biscuit tins on these shelves were re-arranged on the remaining 16 shelves. Due to this, the number of biscuit tins on each remaining shelf increased by 5.
What was the number of biscuit tins on each shelf at first?

Answer: _____

2

19. A square and a rectangle have the same area. If the rectangle has a length of 12 cm and a breadth of 3 cm, what is the perimeter of the square?

Answer: _____cm

20. In a competition, Benson cycled for 5 km at the rate of 12 km/h and ran for 3 km at the rate of 9 km/h. How long did he take to complete the race? Express your answer in minutes.
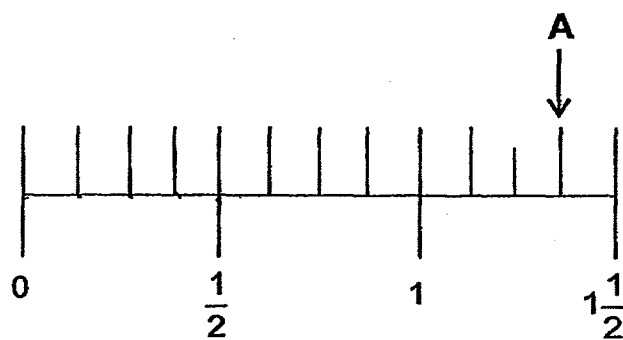
Answer: _____ min

21. The length of a rectangle is 2y. It is 3 cm longer than its breadth. Express the perimeter of the rectangle in terms of y.

Answer: _____ cm

22. Danny has 48 stamps. He gave $\frac{1}{4}$ of his stamps to Elise and 21 stamps to Fred. How many stamps does Danny have left?

Answer: _____

23. Write down the fraction represented by the letter A.

A
↓

```
|  |  |  |  |  |  |  |  |  |  |  |
0           1/2          1        1 1/2
```

Answer: _____

24. The ratio of the length of a rectangle to its breadth is 5 : 3. If the difference between the length and the breadth is 6 cm, find the area of the rectangle.

Answer: _____ cm^2

25. A van left Town M to Town N at 10.10 p.m. on Monday night. It reached Town N at 8.35 a.m. the next morning. How long did the van take to travel from Town M to Town N?

Answer: _____h_____min

Questions **26** to **30** carry 2 marks each. Show all mathematical statements clearly in the space below each question and write your answers in the spaces provided. Give your answers to the units stated and to its simplest form whenever necessary. **(10 marks)**

26. The diagram below is not drawn to scale. AB and CD are straight lines. Given that $\angle x$ is half of $\angle y$, find the value of $\angle z$.
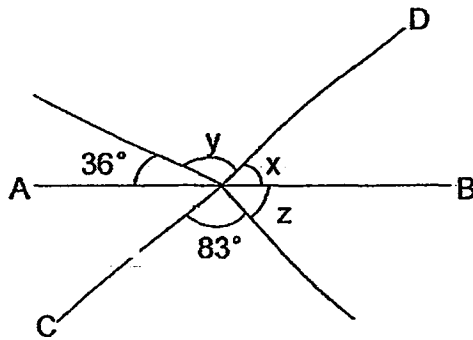
Answer: _____ °

27. The ratio of the number of stamps Dex has to the number of stamps Ethan has is 7 : 3. If Dex gives 10 stamps to Ethan, both will have an equal number of stamps. Find the total number of stamps the boys had.

Answer: _____

6

28. A rectangular container measures 30 cm by 50 cm by 20 cm. Melvin uses a 600 cm^3 cup to fill the container completely with water. How many full cups must he pour into the container before he can fill the container completely?

Answer : _____

29. The table below shows the mass of four boys. Whose mass is nearest to their average mass?

Name of boy	Mass (in kg)
Allen	23
Benny	25
Carl	32
Dennis	36

Answer : _____

30. $\dfrac{7}{12}$ m of ribbon is cut into shorter pieces. Each of the shorter pieces must measure $\dfrac{1}{6}$ m. What is the length of the remaining piece?

Answer : _____ m

Anglo-Chinese School (Primary)

MID-YEAR EXAMINATION 2014
MATHEMATICS
PAPER 2
PRIMARY SIX

Name: _____ ( )   Class: Primary 6 ___

Date: 9 May 2014   Duration of Paper 2: 1h 40min

_____
Parent's/Guardian's signature

Section	Maximum Marks	Marks Obtained
Paper 2 Section A. Short Answers	10	
Paper 2 Section B. Problem Sums	50	
Total Marks	60	

Questions **1** to **5** carry 2 marks each. Show your mathematical statements clearly in the space provided for each question and write your answers in the spaces provided. Give your answers to the units stated and to its simplest form whenever necessary. **(10 marks)**

1. Paul and Jonathan had 175 and 117 marbles respectively. After each of them gave away an equal number of marbles to Linda, Paul found that he had thrice as many marbles as Jonathan. How many marbles were given to Linda?

    Answer: _____

2. A survey was carried out on the households with children in Happy Estate. The bar graph shows the number of children each household has in the estate.
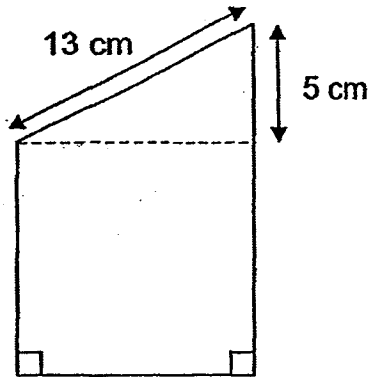

    Number of children per household in Happy Estate

    Number of households (y-axis): 0, 10, 20, 30, 40, 50, 60

    Number of child / children per household (x-axis): 1, 2, 3, 4, 5
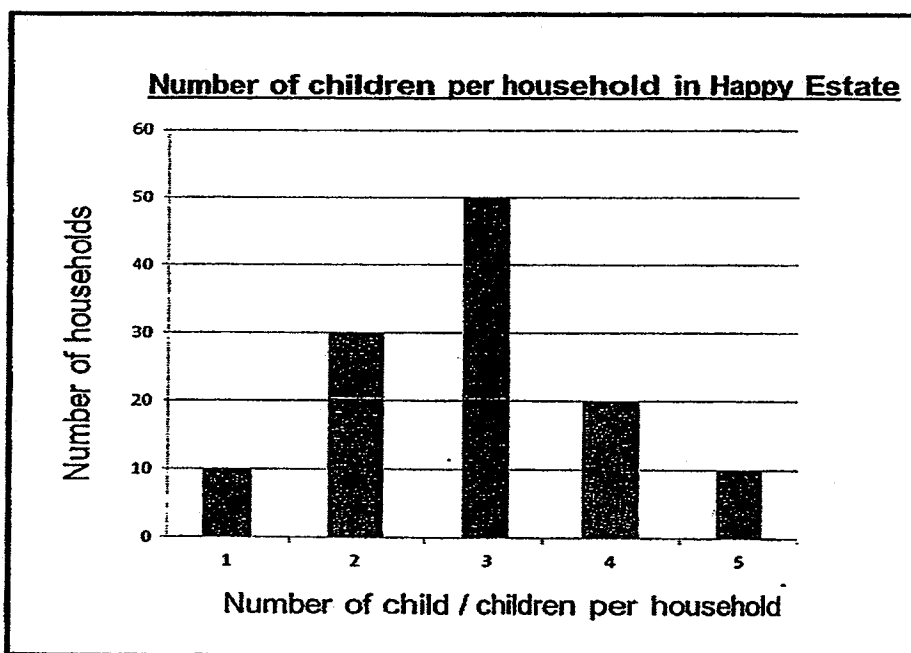
    What fraction of the households has more than 3 children?

    Answer: _____

2

3. The figure given below, not drawn to scale, is made up of a square and a right-angled triangle. Its perimeter is 54 cm.
Find the area of the figure.

13 cm

5 cm

Answer: _____ cm^2

4. Mrs Lim had a bag of rice. Her family ate an equal amount of rice each day. After 3 days, she had $\frac{4}{5}$ of the rice left. After another 8 days, she had 8 kg of rice left. How much rice was in the bag at first?

Answer: _____ kg

5. A box weighs 19.5 kg when it is filled with 15 identical books. The same box weighs 7 kg when it is filled with 5 identical books. What is the mass of the empty box?

Answer: _____ kg

For questions **6 to 18**, show your steps 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.

The number of marks available is shown in brackets [ ] at the end of each question or part-question.   (50 marks)
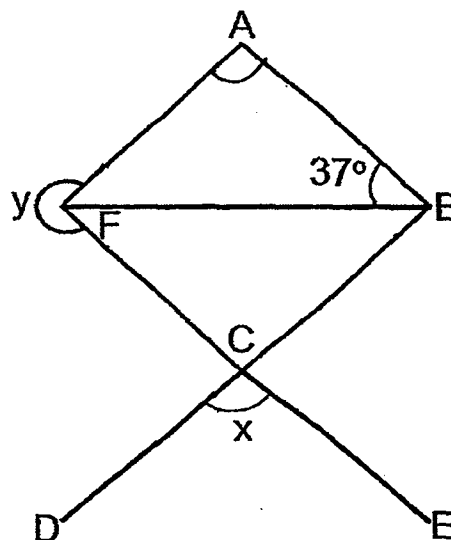
6.   Rachel, Sandra and Tiffany went shopping together. Rachel spent 30% more than Sandra. Tiffany spent 18% less than Sandra. If Tiffany spent $574, find the total amount of money the three girls spent altogether.

Answer: _____ [3]

7.   In the figure below, not drawn to scale, BCD and FCE are straight lines. ABCF is a rhombus and $\angle ABF = 37°$.

(a) Find $\angle x$.

(b) Find $\angle y$.

Answer: (a) _____ [2]

(b) _____ [1]

8.   Jeremy's savings was $\frac{2}{7}$ less than Keith's. After Jeremy had given

$224 to Keith, the amount of savings Jeremy had left is $\frac{3}{7}$ of Keith's

money. Find the total amount of savings of the two boys.

Answer: _____ [3]

9.   The figure below shows a piece of piece of paper made up of two
      identical right-angled triangles. Two identical semicircles with diameter
      7 cm are cut from it. Find the perimeter of the remaining piece of paper.
      (Take $\pi = \frac{22}{7}$)

Answer: _____ [3]

6
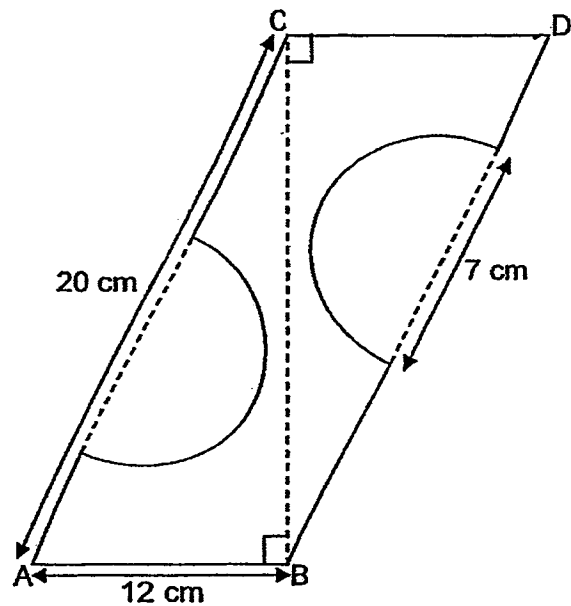
10. The line graph shows the amount of juice prepared by five children.

Amount of juice prepared by 5 children
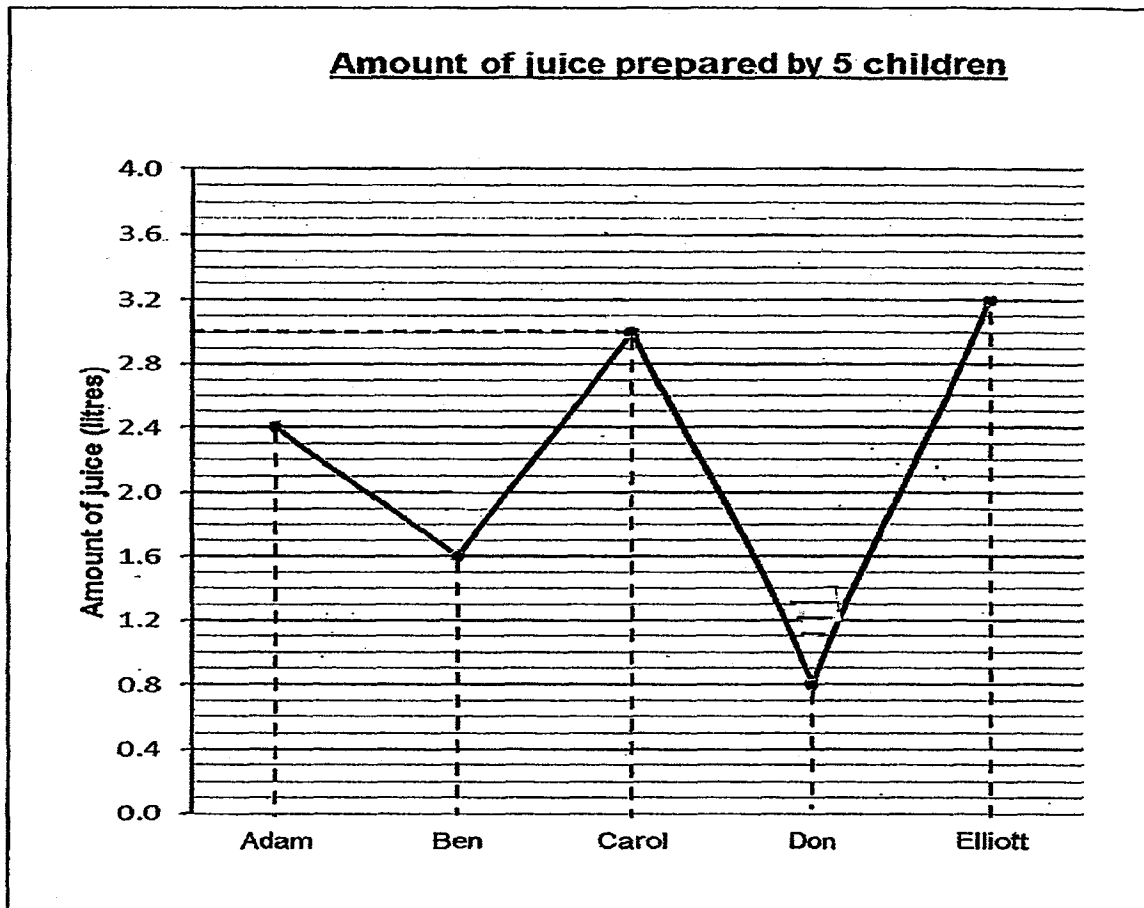
(a) Who made half as much juice as Ben?

Answer: (a) _____ [1]

(b) What percentage of the total amount of juice is made by Carol?
Give your answer correct to the nearest one percent.

Answer: (b) _____ [2]

11. In the figure below, not drawn to scale, AC is parallel to ED and
    BF = AF. BFE is a straight line. CDEF is a parallelogram, $\angle DEF = 80°$
    and $\angle EAF = 35°$. Find $\angle BAE$.

Answer: _____ [3]

8
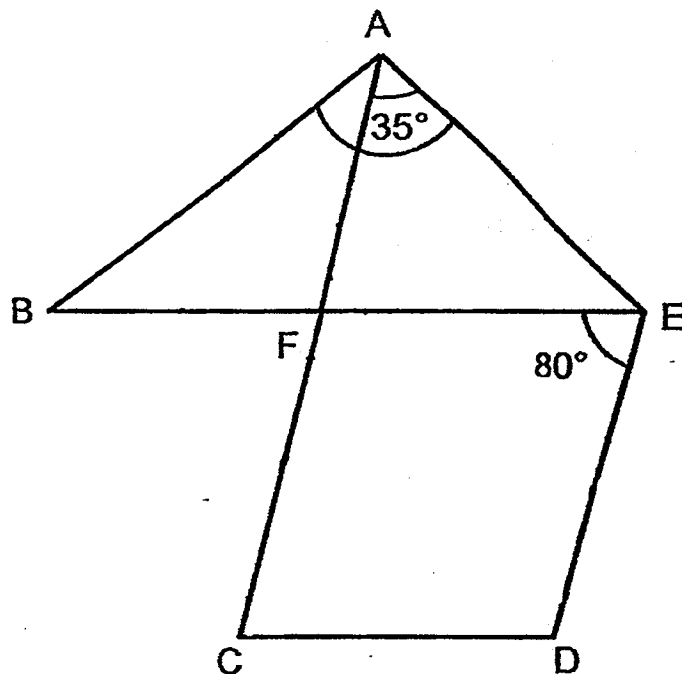
12. The table below shows the daily wages of Clark.

| Day of the Week	Daily Wage
Monday to Friday	$y per day
Saturday	$(2y + 5)
Sunday	$(5y - 1)

Clark works from 6th March (Thursday) to 12th March (Wednesday).

(a) How much is Clark's wages for this period?

(b) If y = 12, how much more money will Clark earn on a Sunday than on a Saturday?

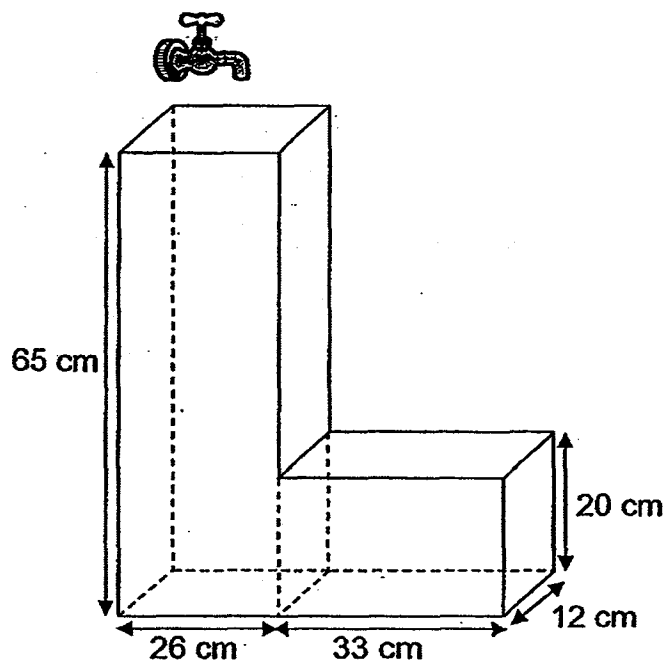Answer: (a) _____ [2]

(b) _____ [2]

9

13. At 08 00, a car left Town A and travelled towards Town B at 85 km/h. At the same time, a lorry left Town A and travelled in the opposite direction towards Town C. When the lorry reached Town C at 11 00, the car was 20 km away from Town B. If Town B and Town C were 455 km apart, find the speed of the lorry.

Town C — Town A — Town B

455 km
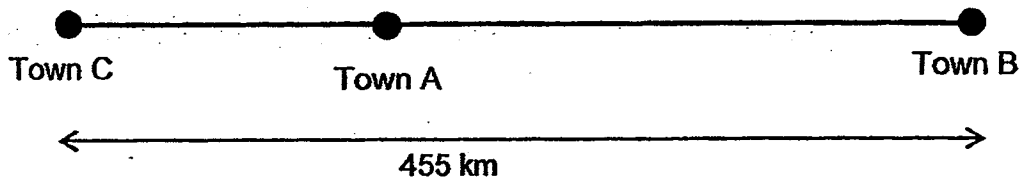
Answer : _____[4]

14. The figure below, not drawn to scale, shows an empty water tank. At 8.55 a.m., it is filled with water from a running tap with water running at a rate of 1.41 litres per minute.
At what time will the water tank be completely filled with water?

Answer : _____ [4]

15. $\frac{2}{5}$ of the female members and $\frac{3}{4}$ of the male members in Cookery Club took part in the cake baking competition. Each female participant baked 4 cakes while each male participant baked 3 cakes. A total of 212 cakes were baked. How many members did not take part in the baking competition if 104 cakes were baked by the female participants?

Answer : _____ [5]

16. Mr Tang and Mr Low went to an electronic shop. At the shop, the home sound system was priced at $5 690.

(a) If Mr Tang bought the home sound system with full cash payment, he will be given a discount of 12%. How much did Mr Tang pay for the home sound system?

(b) If Mr Low made a deposit of $800 and paid the remaining amount in 12 monthly installments, how much was Mr Low's monthly installment?
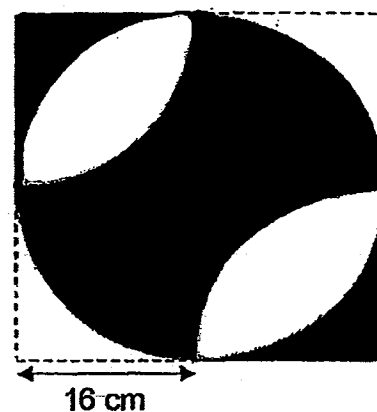
Answer: (a) _____ [2]

(b) _____ [3]

17. Noah spent $\frac{1}{3}$ of his money and an additional $200 on a camera. Then

he spent $\frac{3}{4}$ of his remaining money and an additional $75 on a watch.

Then he spent $\frac{2}{5}$ of his remaining money *and* an additional $24 on a bag. If

Noah had $273 left, how much more money did he spend on the watch than on the camera?

Answer : _____ [5]

18. The figure is made up of 6 identical quarter circles.
The radius of each quarter circle is 16 cm.
Taking $\pi = 3.14$, find

(a) the area of the shaded area.

(b) the perimeter of the shaded area.

16 cm

Answer: (a) _____ [3]

(b) _____ [2]

End of Paper 2

15

EXAM PAPER 2014
SCHOOL : ACS
SUBJECT : PRIMARY 6 MATHEMATICS

TERM   :   SA1

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

16)3.5   17)11   18)20   19)24 cm   20)45 min

21)(8y – 6) cm   22)15 stamps   23)1 3/8   24)135 cm2

25)10 h 25 min   26)49°   27)50 stamps   28)50

29)Carl   30)1/12 m

Paper 2
1)175 – 117 = 58
   58÷2 = 29
   29 x 3 = 87
   175 – 87 = 88
   88 x 2 = 176 marbles.

2)10 + 30 + 50 + 20 + 10 =120
   20 + 10 = 30
   30/120 = ¼

3)54 − (13 + 5) = 36
  36÷3 = 12
  ½ x 12 x 5 = 30
  12 x 12 = 144
  144 + 30 = 174 cm2

4)4/15→ 8 kg
  1/15→2 kg
  15/15→ 30 kg

5)1 box + 15 bks →19.5 kg
  1 box + 5 bks →7 kg
  10 bks→19.5 − 7 = 12.5
  12.5÷10 = 1.25
  1 box + (1.25 x 5) = 7
  1 box = 7 − (1.25 x 5) = 0.75

6)82% →574/321% →574/82 x 312
  = $2184

7)a)37° x 2 = 74°
   360° − 74° − 74° = 212°
   212° /2 = 106°
 b)360° − 74 = 286°

8)14u→224
  120u→224/14 = $1920

9)Cir of 1 circle = ΠD
  =22/7 x 7 = 22 cm
  22 + 13 x 2 + 12 x 2 = 72 cm

10)a)Don
   b)2.4 + 1.6 +3 + 0.8 + 3.2 = 11
    11÷100 = 0.11
     3÷0.11 = 27.27272727
     ≈27%

11)180° − 100° = 80°
   ∠BAF = 80° ÷2 = 40°
   40° + 35° = 75°

12)a)y +2y +5 + 5y − 1 +y + y + y + y = $(12y + 4)
   b)2 x 12 = 24
      24 + 5 = 29
      12 x 5 = 60
      60 − 1 = 59
      59 − 29 = 30 more

13)800→1100 (3hr)
   85 x 3 = 255
   255 +20 = 227
   455 − 275 = 180
   180 ÷3 = 60km/h

14)26 x 12 x 65 = 20280
   33 x 12 x 20 = 7920
   20280 + 7920 = 28200
   28200÷1000 = 28.2
   28..2÷1.41 = 20
   8.55 am + 20 min = 9.15 am

15)104 ÷4 = 26
   26 ÷2 = 13
   13 x 3 = 39
   212 − 104 = 108
   108÷3 = 36
   36 ÷3 = 12
   12 + 39 = 51 members

16)a)100 − 12 = 88
     5690 ÷100 = 56.90
     56.90 x 88 = $5007.20
   b)5690 − 800 = 4890
     4890 ÷12 = $407.50

17)273 + 24 = 297
   297/3 x 5 = 495
   495 + 75 = 570
   570 x 4 = 2280
   2280 + 200 = 2480
   2480 ÷2 = 1240
   1240 + 200 = 1440
   570 x 3 + 75 = 1785
   1785 − 1440 = $345

18)a) $3.14 \times 16 \times 16 = 803.84$

$803.84 \div 4 = 200.96$

$\frac{1}{2} \times 16 \times 16 = 128$

$200.96 - 128 = 72.96$

$72.96 \times 2 = 145.92$

$145.92 \times 2 = 291.84$

$803.84 - 291.84 = 512$

$200.96 \times 2 = 401.92$

$401.92 - 291.84 = 110.08$

$110.08 + 512 = 622.08 \text{ cm}^2$

b) Cir of $1\frac{1}{2}$ circle $= \Pi D \times 1\frac{1}{2}$

$= 3.14 \times 32 \times 1.5 = 150.72$

Total perimeter $= 150.72 + (16 \times 4) = 214.72 \text{ cm}$