Index No. ☐☐☐☐☐ - ☐

PRELIMINARY EXAMINATION 2013

PRIMARY 6

FOUNDATION MATHEMATICS
PAPER 1
(BOOKLET A)

INSTRUCTIONS TO CANDIDATES

1. Write your Index No. in the boxes at the top right hand corner.

2. Do not turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. Shade your answers in the Optical Answer Sheet (OAS) provided.

6. The use of calculators is **NOT** allowed.

Total Time for Booklets A & B: 1 hour

Questions 1 to 10 carry 1 mark each. Questions 11 to 20 carry 2 marks each. For each question, 4 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. (30 marks)

1. $35\ 008 = 30\ 000 + \boxed{?} + 8$

What is the missing number in the box?

(1) 50 000

(2) 5 000

(3) 50

(4) 5

2. Round off 812.63 to the nearest whole number.

(1) 800

(2) 810

(3) 812

(4) 813
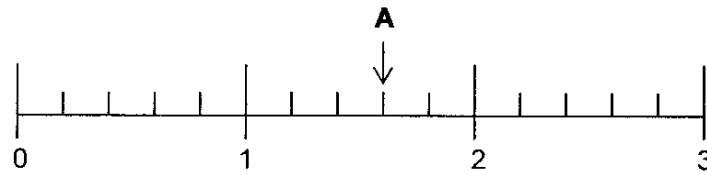
3. Express $1\frac{1}{4}$ as a decimal.

(1) 1.10

(2) 1.14

(3) 1.25

(4) 1.40

4. Which of the following is **NOT** a factor of 24?

(1) 14

(2) 8

(3) 6

(4) 4

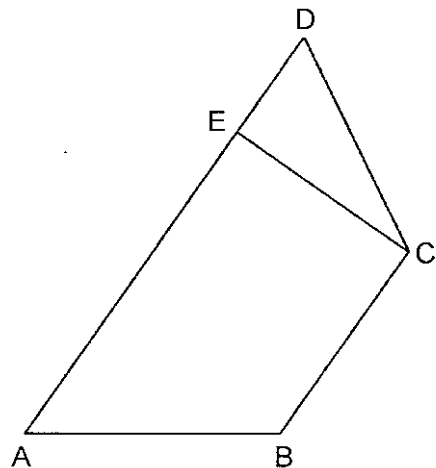5. In the number line shown below, which mixed number does the letter **A** stand for?

A

| | | | |
|0|1|2|3|

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

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

(3) $1\frac{3}{4}$

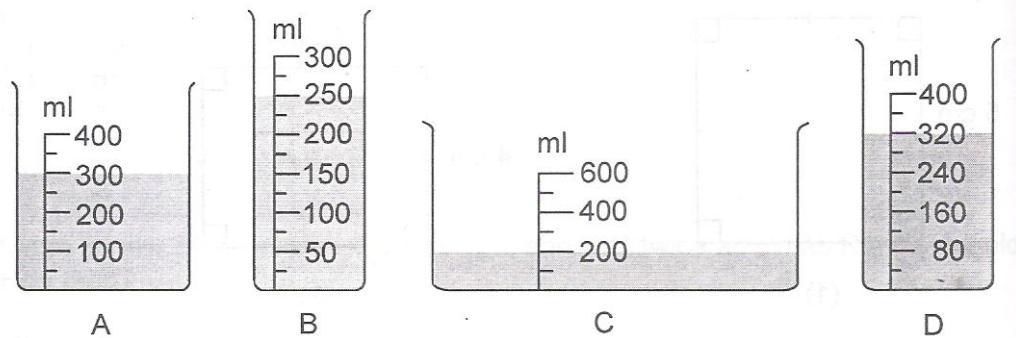(4) 1 3/10

6. Express $\frac{1}{4}$ meter in centimeters.

(1) 0.25

(2) 2.5

(3) 25

(4) 250

7. The figure shown below is a trapezium. Which of the following two lines are perpendicular?

(1) AB and CB

(2) AB and CE

(3) Ad and CB

(4) AD and CE

8. Which of the following containers has the **most** water?

  A   B   C   D

(1) A

(2) B

(3) C

(4) D

9. The perimeter of a square is 36 cm. What is the length of each side of the square?

(1) 6 cm

(2) 9 cm

(3) 12 cm

(4) 18 cm

10. Siti gave $\frac{1}{2}$ of a cake to her neighbour. She cut the remainder into 3 equal pieces and gave them equally to her children. What fraction of the whole cake did each child receive?
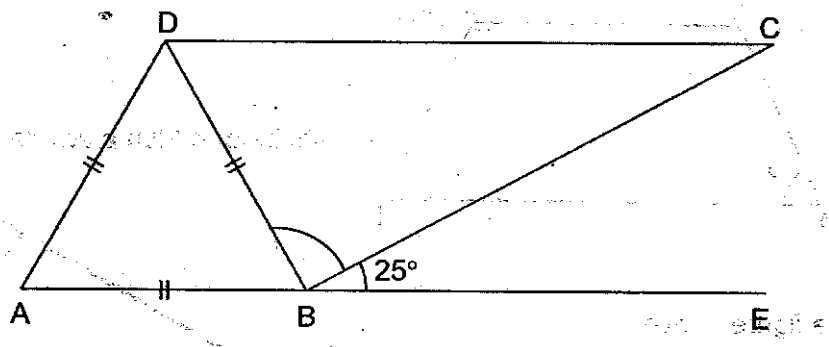
(1) $\frac{1}{6}$

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

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

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

11. $\dfrac{3}{7} = \dfrac{6}{6 + \square}$

What is the missing number in the box?

(1)   1

(2)   8

(3)   10

(4)   4

12.   In the figure shown, ABD is an equilateral triangle and ABE is a straight line.
Find ∠CBD.

(1) 60°

(2) 85°

(3) 90°

(4) 95°

13.   A wheel turns 300 times in 6 minutes. At this rate, how many times does it turn in 60 seconds?

(1)   5

(2)   6

(3)   50

(4)   60

14. The prices of some cakes at Sweetheart Cake Shop are shown below.

SWEETHEART CAKE SHOP

Pandan Cake $1 per piece

Cheese Cake $2 per piece

Jeevan bought 3 pieces of pandan cake and a few pieces of cheese cake. He paid $15 altogether. How many pieces of cheese cake did he buy?

(1)   5

(2)   6

(3)   9

(4)   12

15. Ken paid a membership fee of $60 to join Comic Rental Club. He also paid 80 cents for every comic book he rented. Altogether he paid $68 for the comic books and the membership fee. How many comic books did he rent?

(1)   8

(2)   10

(3)   75

(4)   85

16. From Monday to Saturday, Mei Ling gets 80 cents from her mother each day. On Sunday, she gets 50 cents. How much money does she get in a week?

(1) $1.30

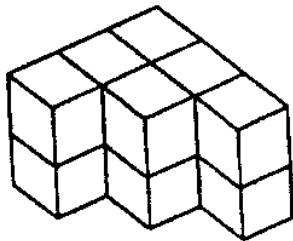(2) $2.10

(3) $5.00

(4) $5.30

17. Each figure below shows a solid that is made up of small cubes of the same size. Which one of these figures can be rearranged to form a cube?
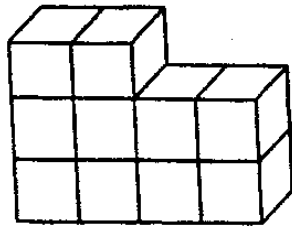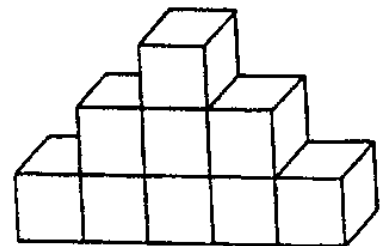

(1)
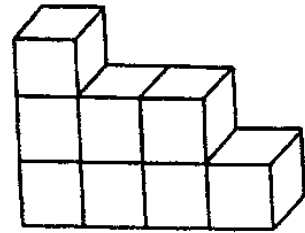
(2)

(3)

(4)

18. The price of one potato pie was $2 and the price of one tuna pie was $4. During a sale, when the pies were sold at half the price, Kim spent a total of $12 on the two kinds of pies. She bought an equal number of pies of each kind. How many pies did she buy altogether?
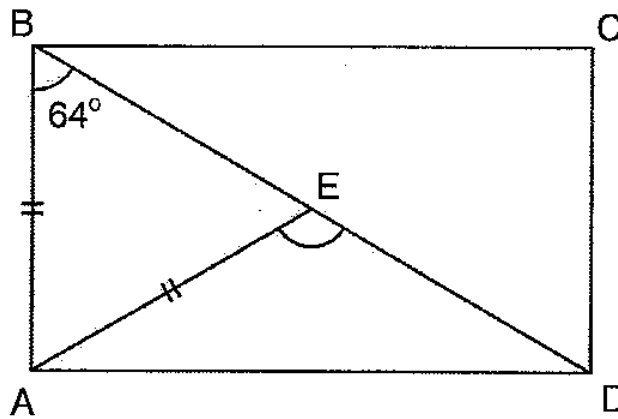
(1)   8

(2)   2

(3)   9

(4)   4

19. Desmond is 170 cm tall. He is 15 cm taller than John and 2 cm shorter than Zainal. What is the difference in height between John and Zainal?

    (1)   13 cm

    (2)   17 cm

    (3)   155 cm

    (4)   185 cm

20. In the figure, ABCD is a rectangle, AB = AE and $\angle ABE = 64°$. BED is a straight line.

    Find $\angle AED$.

    (1) $109°$

    (2) $116°$

    (3) $128°$

    (4) $154°$

Index No. ☐☐☐☐☐ - ☐

PRELIMINARY EXAMINATION 2013

PRIMARY 6

FOUNDATION MATHEMATICS
PAPER 1
(BOOKLET B)

INSTRUCTIONS TO CANDIDATES

1. Write your Index No. in the boxes at the top right hand corner.

2. Do not turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. The use of calculators is **NOT** allowed.

Total Time for Booklets A & B: 1 hour

Questions 21 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.

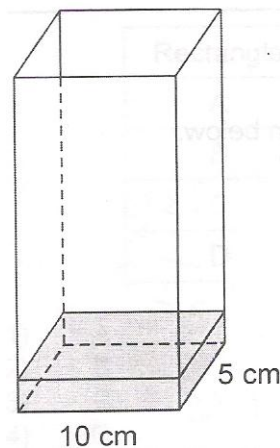(20 marks)

21.   Find the value of

(a) 71 + 8.2

(b) 928 ÷ 100

Ans: (a) _____

(b) _____

22.   There is 100 cm^3 of water in the rectangular container shown. What is the height of water level in the container?

5 cm

10 cm

Ans: _____ cm

23.   In a group, there are 40 teachers and 160 pupils. What percentage of the group are teachers?

Ans: _____ %

24.   Vani paid a total of $58 for 2 skirts at Shop A. She paid a total of $77 for another 3 skirts at Shop B. On the average, how much did she spend on each skirt?
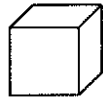
Ans: $ _____
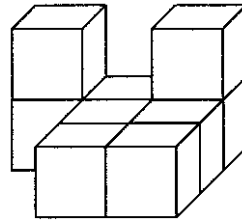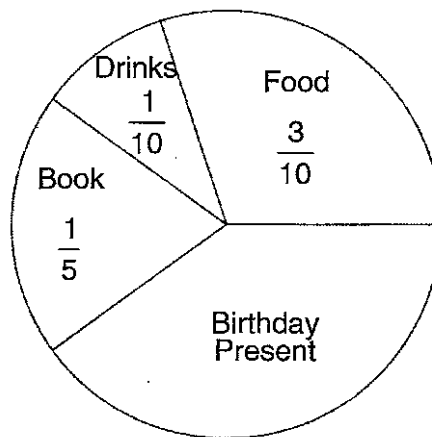
1

25.

Figure 1

Figure 2

Figure 1 shows a cube. It has a volume of 8 cm^3.
Some of these cubes are used to form the solid shown in Figure 2. Find the volume of the solid.

Ans: _____ cm^3

Use the pie chart shown to answer questions 26 and 27.

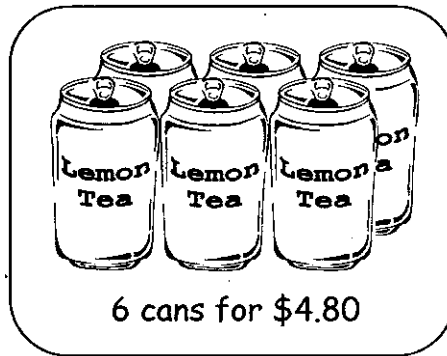The pie chart shows how Freddy spent his pocket money last week.

26.   What fraction of Freddy's pocket money was spent on the birthday present?
       (Give your answer in its simplest form)

Ans: _____

27.   Freddy spent $18 on food. How much did he spend on drinks?

Ans: $ _____

28. How much do you have to pay for 18 cans of lemon tea?

6 cans for $4.80

Ans: $ _____

29. The table below shows the cost of renting bicycles at a shop.

Rental of bicycles	
For the first hour	$4.00
For every additional 30 minutes	$1.50

Find the cost of renting a bicycle for 3 hours.

Ans: $ _____

30. In the figure shown, ABCD is a rectangle and AD = AE. Find ∠ a.

71° E

a
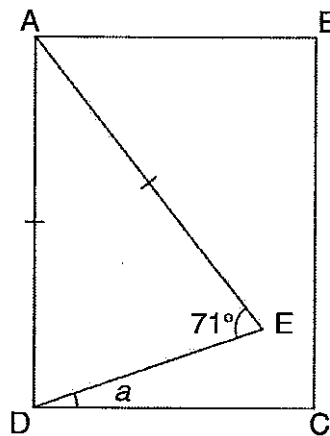
Ans: _____ °

Index No. ☐☐☐☐☐ - ☐

PRELIMINARY EXAMINATION 2013

PRIMARY 6

FOUNDATION MATHEMATICS
PAPER 2

INSTRUCTIONS TO CANDIDATES

1. Write your Index No. in the boxes at the top right hand corner.

2. Do not turn over this page until you are told to do so.

3. Follow all instructions carefully.

4. Answer all questions.

5. The use of an approved calculator is expected, where appropriate.

Time: 1 hour 15 min

Questions 1 to 10 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided.

For questions which require units, give your answers in the units stated.

(20 marks)

1. Anthony bought a pen. He paid the cashier with a $10 note. The cashier gave him 3 fifty-cent coins and 7 ten-cent coins as change. How much did Anthony pay for his pen?

Ans: $ _____

2. A hawker uses one bottle of black soya sauce per day. How many litres of black soya sauce will he use in one week? Give your answer in litres.

1.4 *l*

Ans: _____ *l*

3. Machine A could fill 15 drums of oil per hour while Machine B could fill 12 drums of oil in half an hour. How many drums of oil could both machines fill in 3 hours?
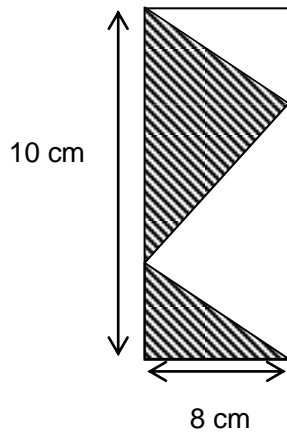
Ans: _____

1

4. Last Monday, Sarah took 45 minutes to travel from her house to her school. If she arrived at her school at 7.10 a.m., at what time did she leave her house?

Ans: _____ a.m.

5. Find the area of the shaded part.
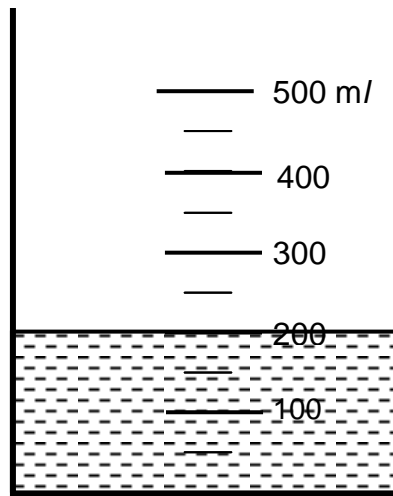
10 cm

8 cm

Ans: _____ cm²

6. Sentosa Interact Club has 120 members. 30% of them are senior citizens. How many of the members are **not** senior citizens?

Ans: _____

7. The container below contains some orange syrup.
    Eugene pours in another 250 m*l* of orange syrup.
    On the same container, use your ruler and pencil to draw the **new level** of orange syrup.

500 m*l*

400

300

200

100

8. Mr Lee needs to buy 15 chicken burgers for his family. What is the smallest amount he has to pay?

Special Offer

$3 per chicken burger

Buy 4 get 1 free

Ans: $ _____

3

9.   Amy has an equal number of 10-cent coins and 20-cent coins. She has $2 worth of 20-cent coins. How much money does she have altogether?

Ans: $ _____

10.   Salmah is 3 years younger than Fitri. Two years ago, Fitri was 10 years old. How old is Salmah now?

Ans: _____

4

For questions 11 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.

(30 marks)

11. The table shows the results of a class of pupils in their Mathematics test.

	Number of pupils
Band 1	8
Band 2	15
Band 3	12
Band 4 (failed grade)	5

(a) How many pupils passed their Mathematics test?

(b) What percentage of the pupils passed their Mathematics test?
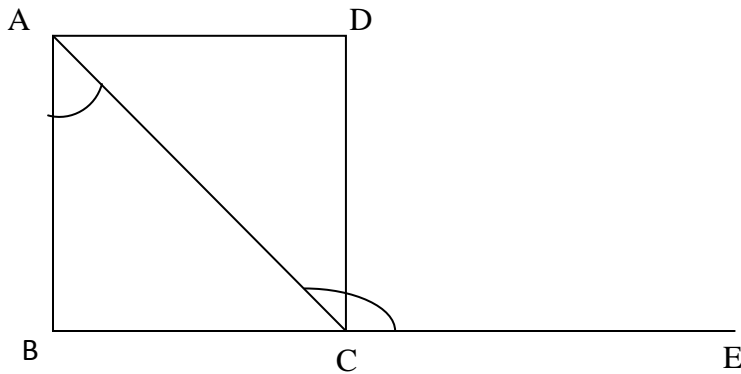
Ans: (a) _____ [1]

(b) _____ [2]

5

12. The table below shows the charges of a car rental company.

Dave's Car Rental	
Days	Cost
First 3 days	$60 per day
4th day onwards	$50 per day

If Mr Osman rented a car for 1 week, how much did he pay?

Ans: _____ [3]

13. In the figure shown below, ABCD is a square and BCE is a straight line.

(a) Find $\angle$ BAC.

(b) Find $\angle$ ACE.

Ans: (a) _____ [1]

(b) _____ [2]

6

14. Farhana scored an average of 84 marks for English, Math and Science. She scored 78 marks for English. If she scored the same marks for Math and Science, what was her score for Math?

Ans: _____ [3]

15. Betty spent $\frac{1}{4}$ of her money on food and $\frac{1}{2}$ of her money on clothes. She saved the remaining $1200.

(a) What fraction of her money did she save?

(b) How much money did she have at first?

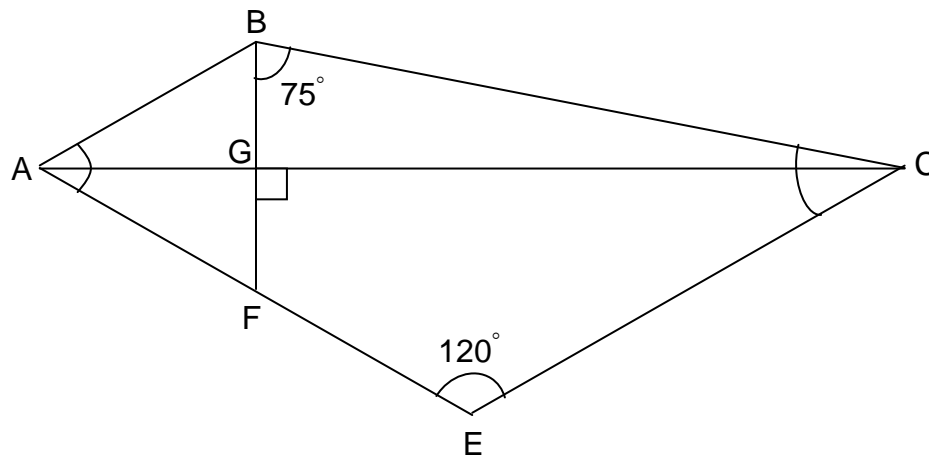Ans: (a) _____ [2]

(b) _____ [2]

16. In the figure below, AE = CE, FG = BG and AB = AF.

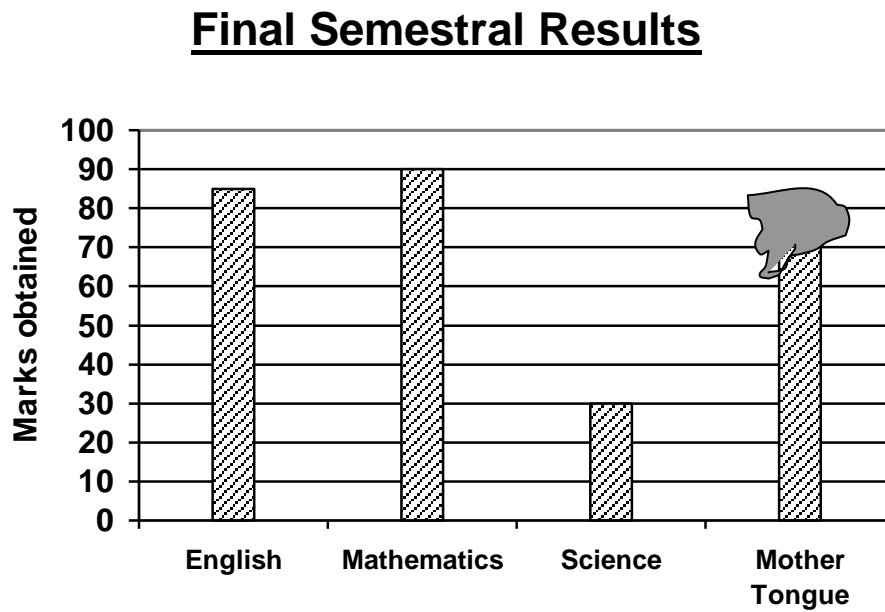 $\angle$AEC is 120° and $\angle$CBG is 75°.

(a) Find $\angle$FAB.

(b) Find $\angle$BCE

Ans: (a) _____ [2]

(b) _____ [2]

17. The graph below shows the marks of 4 different subjects obtained by Melvin for his final semestral examination. The Mother Tongue mark was smudged by water during printing.

<u>Final Semestral Results</u>

(a) If the passing mark was 50, which subject did Melvin fail?
(b) If the average mark of the 4 subjects was 70, what was his total mark for his final Semestral examination?
(c) How many marks did Melvin obtain for his Mother Tongue?

Ans: (a) _____ [1]

(b) _____ [1]

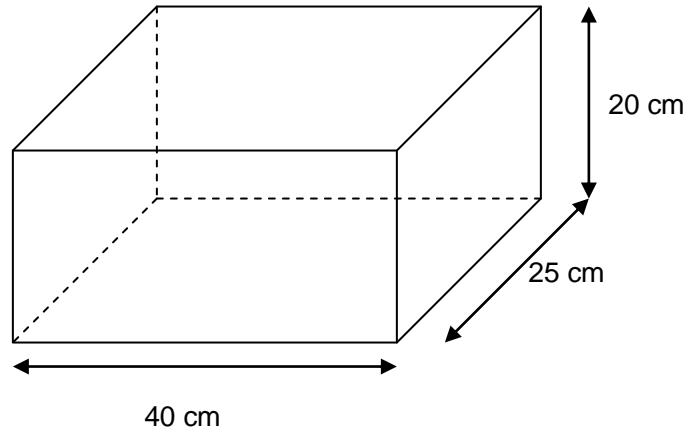(c) _____ [3]

18. Miss Tay bought a fish tank measuring 40 cm by 25 cm by 20 cm. She filled the tank with water until it was half full.

20 cm

25 cm

40 cm

(a)   Find the volume of water in the tank.

(b)   If water was drained out at the rate of 2.5 litres per minute, how long would it take Miss Lim to drain out the water completely in the fish tank ? (1 litre = 1000 cm^3)

Ans: _____ [5]

Answer Key

PAPER 1

BOOKLET A

1.	**2**	6.	**3**	11.	**2**	16.	**4**
2.	**4**	7.	**4**	12.	**4**	17.	**2**
3.	**3**	8.	**4**	13.	**3**	18.	**1**
4.	**4**	9.	**2**	14.	**2**	19.	**2**
5.	**2**	10.	**1**	15.	**2**	20.	**2**

BOOKLET B

21.   (a)   <u>79.2</u>

       (b)   <u>9.28</u>

22. $100 \div (10 \times 5) = \underline{2 \text{ cm}}$

23. $\dfrac{40}{200} = \dfrac{20}{100} = \underline{20\%}$

24. $\$58 + \$77 = \$135$

       $\$135 \div 5 = \underline{\$27}$

25. $8 \times 9 = \underline{72 \text{ cm}^3}$

26. $\dfrac{1}{5} + \dfrac{1}{10} + \dfrac{3}{10} = \dfrac{2}{10} + \dfrac{1}{10} + \dfrac{3}{10} = \dfrac{6}{10}$

       $\dfrac{10}{10} - \dfrac{6}{10} = \dfrac{4}{10} = \dfrac{2}{5}$

27.   3 units --------- $18

       1 unit   --------- $18 ÷ 3 = <u>$6</u>

28.   6 cans --------- $4.80

       18 cans   --------- $4.80 × 3 = <u>$14.40</u>

29. 1st hour ---------- $4

     Next 2 hours --------- $1.50 × 4 = $6

     $4 + $6 = $10

30. $\angle a = 90° - 71° = \underline{19°}$

PAPER 2

1. 3 × 50¢ = $1.50

    7 × 10¢ = $0.70

    $1.50 + $0.70 = $2.20

    $10 − $2.20 = $7.80
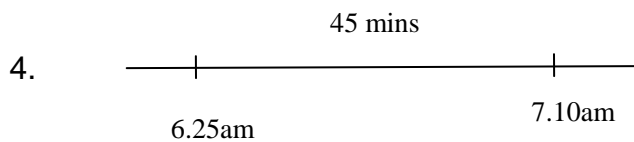
2. 1.4ℓ × 7 = 9.8 ℓ

3. 12 × 2 = 24 drums ------ Machine B in 1 h

    15 + 24 = 39 drums ----- Machine A + Machine B

    1 h --------   39 drums

    3 h --------   39 × 3 = 117

4.
                    45 mins

        ──────┼──────────────┼────

            6.25am   7.10am

5. 10 × 8 = 80 cm²

    80 ÷ 2 = 40 cm²

6. 100% − 30% = 70%

    100% ---------- 120

    10% ---------- 12

    70% ---------- 12 × 7 = 84

7.

A measuring cylinder marked with 500 ml, 400, 300, 200, 100. Shaded liquid fills up to just above the 200 mark.
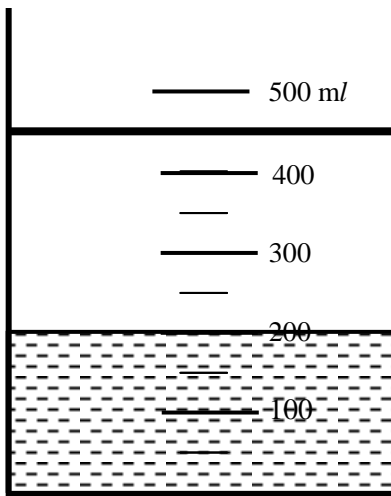
8.   4 × $3 = $12
     $12 × 3 = $36

9. $2 ÷ 20¢ = 10 coins

     10 × 10¢ = $1

     $1 + $2 = $3

10. 10 − 3 = 7

     7 + 2 = 9 years old

11. (a)   8 + 15 + 12 = 35

     (b)   8 + 15 + 12 + 5 = 40

           $\frac{35}{40}$ × 100% = 87.5%

12. $60 × 3 = $180

     $50 × 4 = $200

     $180 + $200 = $380

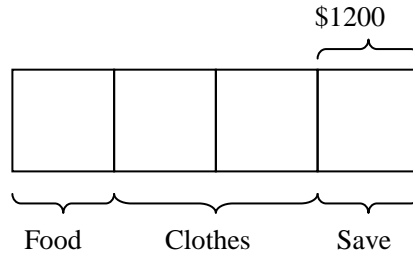13. (a)   ∠ BAC = 45°

     (b)   ∠ ACE = 180° − 45° = 135°

14. $84 \times 3 = 252$

$252 - 78 = 174$

$174 \div 2 = 87$

15. $\dfrac{1}{4}$ ------ Food

$\dfrac{1}{2} = \dfrac{2}{4}$ ------ Clothes

Food   Clothes   Save

$1200

(a) $\dfrac{1}{4}$

(b)   1 unit ------- $1200
       4 units ------ $1200 × 4 = $4800

16. $180^{\circ} - 120^{\circ} = 60^{\circ}$

$60^{\circ} \div 2 = 30^{\circ}$ ----- $\angle EAC$

$30^{\circ} + 30^{\circ} = \underline{60^{\circ}}$ ------- (a)

$\angle BCG = 180^{\circ} - 75^{\circ} - 90^{\circ} = 15^{\circ}$

$\angle BCE = 15^{\circ} + 30^{\circ} = \underline{45^{\circ}}$ ------- (b)

17.   (a)   <u>Science</u>

       (b) $70 \times 4 = \underline{280}$

       (c) $85 + 90 + 30 = 205$

              $280 - 205 = \underline{75}$

18.   (a) $40 \times 25 \times 20 = 20\,000 \text{ cm}^3$

              $20\,000 \div 2 = 10\,\underline{000 \text{ cm}^3}$

       (b) $10\,000 \text{ cm}^3 = 10 \text{ litres}$

              2.5 litres --------- 1 min

              10 litres --------- $1 \times 4 = 4 \underline{\text{ mins}}$