Questions 1 to 10 carry 1 mark each. Questions 11 to 20 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. (30 marks)

1. In 201 437, which one of the following digits is in the hundreds place?

(1)   1
(2)   2
(3)   3
(4)   4

2. What is the missing number in the box?

$$\frac{2}{5} = \frac{8}{\square}$$

(1)   5
(2)   11
(3)   13
(4)   20

3. Express $6 + \frac{2}{10} + \frac{35}{10} + \frac{5}{100}$ as a decimal.

(1) 6.375
(2) 6.42
(3) 7.05
(4) 9.75

(Go on to the next page)

4. Raina wants to buy a new pencil case which costs $3.50. How many fifty-cent coins will she need to use?

(1) 5
(2) 7
(3) 35
(4) 70

5. Find the perimeter of the square below.

7 cm
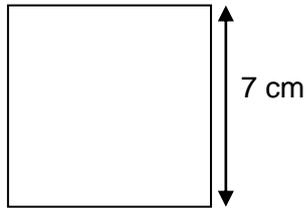
(1)   14 cm
(2)   21 cm
(3)   28 cm
(4)   49 cm

6.   The height of a classroom door is about _____ m.

(1)   0.2
(2)   2
(3)   20
(4)   200

7.   Mary has 20 beads in a box. She gives 25% of them to Janice. How many beads does Janice get?

(1)   5
(2)   7
(3)   13
(4)   25

8.   There are five marked angles in the figure below. Which angle is greater than 180°?
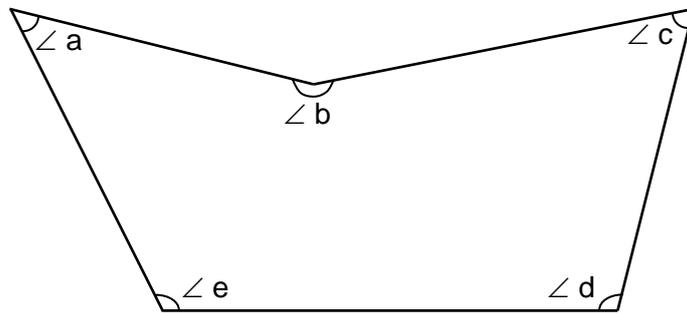
(1)   ∠ b
(2)   ∠ c
(3)   ∠ d
(4)   ∠ e

9.   The table below shows the mass of 4 pupils. Find their average mass.

Name	Mass
Tony	41 kg
Harry	26 kg
Ali	19 kg
Nila	22 kg

(1)   22 kg

(2)   27 kg

(3)   60 kg

(4)   108 kg

10.   In the figure below, which two squares (W, X, Y or Z) must be shaded so that AB becomes the line of symmetry?
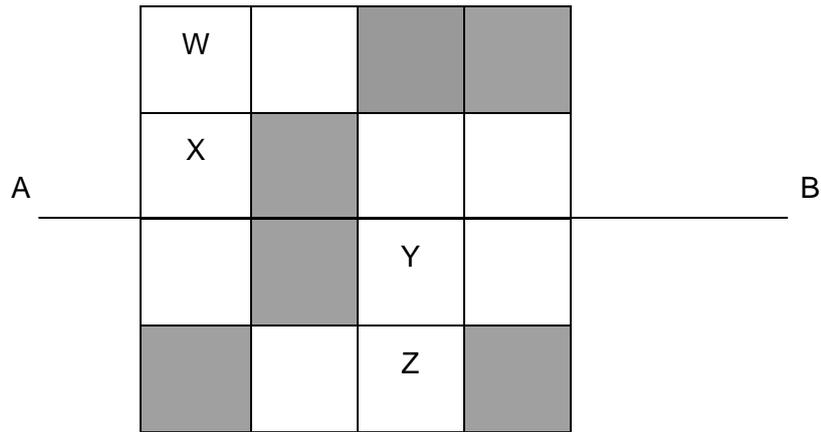
(1)   W and Y
(2)   W and Z
(3)   X and Y
(4)   X and Z

11. $5\dfrac{1}{5}$ hours = ☐ minutes. What is the missing value in the box?

(1)   312
(2)   315
(3)   320
(4)   520

12.   What is the difference between the values of the digit 2 in 0.283 and 0.302?

(1)   0.019
(2)   0.198
(3)   0.202
(4)   0.585

13. David has a 6m long pipe. He cut it into smaller pieces of $\frac{3}{5}$ m long. How many of these smaller pieces can he get?

   (1)   9
   (2)   10
   (3)   11
   (4)   15

14. The figure is made up of an isosceles triangle and a square. What is the total area of the figure?

6 cm

5 cm

4 cm
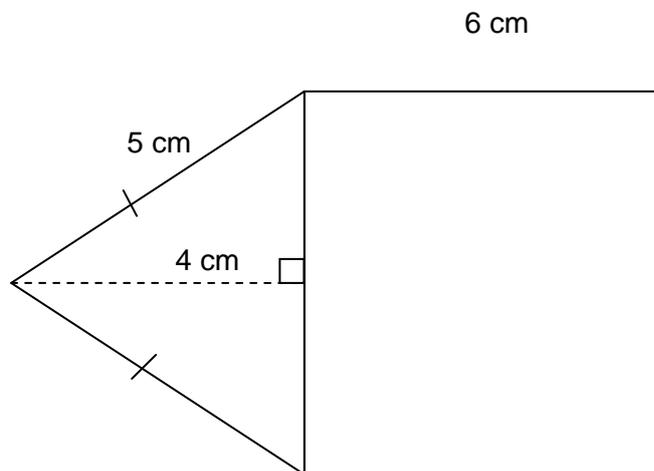
   (1)   44cm^2
   (2)   46 cm^2
   (3)   48 cm^2
   (4)   56 cm^2

15.   A gift shop sold wrapping papers at the prices shown below.

First 10 sheets	$0.50 per sheet
Every additional sheet	$0.20 per sheet

How much did Chun Kiat pay if he bought 12 sheets of similar wrapping paper?

(1) $2.40
(2) $5.00
(3) $5.40
(4) $6.00

16.   The figure below is made up of an isosceles triangle PQT and a rectangle QRST. Find ∠ PQR.

P

50°

Q   T

R   S
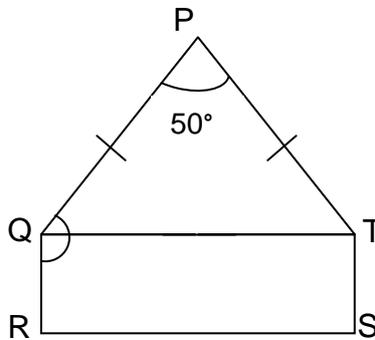
(1)   65°
(2)   130°
(3)   140°
(4)   155°

17. After giving $\frac{1}{3}$ of the money to her friends, Sara had $44 left. How much money did she have at first?

   (1) $ 14
   (2) $ 66
   (3) $ 88
   (4) $ 132

18. The sports event of a school started at 6.45 a.m. and ended at 1.30 p.m. How long was the event?

   (1) 4 h 15 min
   (2) 5 h 15 min
   (3) 6 h 45 min
   (4) 8 h 15 min

19. The pie chart shows the survey result of the pupils' favourite food in a class.

   What percentage of the pupils chose burgers?

   (1) 15%
   (2) 35%
   (3) 105%
   (4) 165%
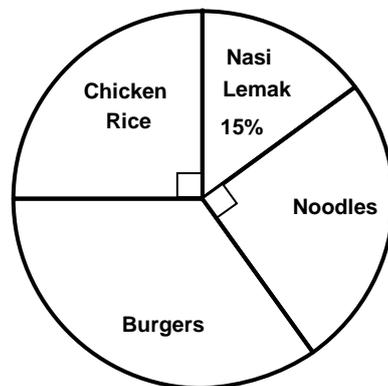
20.   Mangoes are sold at $4.70 for 3 at a supermarket. What is the price for 24 such mangoes?

(1) $ 8.00
(2) $ 14.10
(3) $ 37.60
(4) $ 112.80

End of Booklet A

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) 425 – 75

(b) 8.5 x 8

Ans : (a)_____

Ans : (b)_____

22. The usual price of a pair of high heeled shoes is $125.

How much does Mrs Lee need to pay for the shoes after a 40% discount.

$ALE!

40%

Ans : $ _____

23. The pie chart below shows the different types of animals in a farm.

    There are twice as many horses as dogs.

    If there are 360 animals altogether, how many horses are there?

Ans: _____
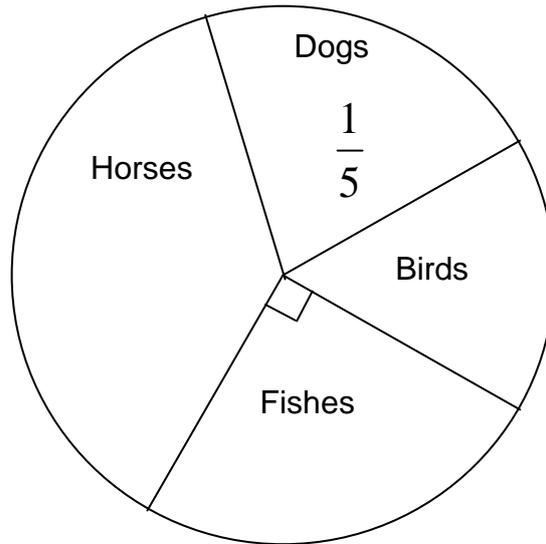
24. The figure below is not drawn to scale.

DB is a straight line. Find ∠ABD.

Ans : _____ °
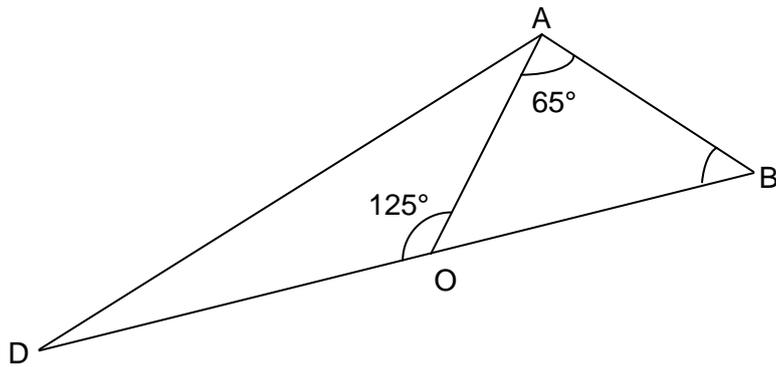
25. Danielle had 20 hairpins less than Stacy. Atiqah had 50 hairpins.

   If the three girls had 150 hairpins, how many hairpins did Stacy have?

Ans: _____

---

26. Mr Chen bought a piece of rope which was $7\frac{2}{5}$ m long.

   He cut 0.25 m of the rope and gave it to his neighbour.

   What was the length of the remaining rope?

Ans: _____m

(Go on to the next page)

27.　A rectangular tank measures 27 cm by 10 cm by 8 cm. What is the volume of the tank?

8 cm

10 cm

27 cm
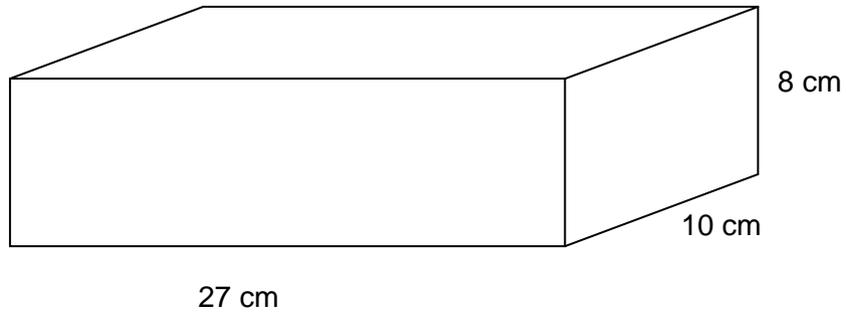
Ans: _____ cm³

28. An internet café charges the following rates.

Tommy uses the internet for 55 minutes. How much must he pay?

Time	Charges
First 30 minutes	$ 5.00
Every subsequent minute	$ 0.20

Ans: $_____

29. $\dfrac{5}{12}$ of people at a concert were children and the rest were adults. There were 360 more adults than children. How many children were there at the concert?

Ans: _____

30. Road marshals were stationed at 200-m intervals along the route of a 5-km race. The first road marshal was standing at the starting point while the last road marshal was at the finishing point. How many road marshals were there altogether?

Starting Point

200 m

...

5 km

Finishing Point
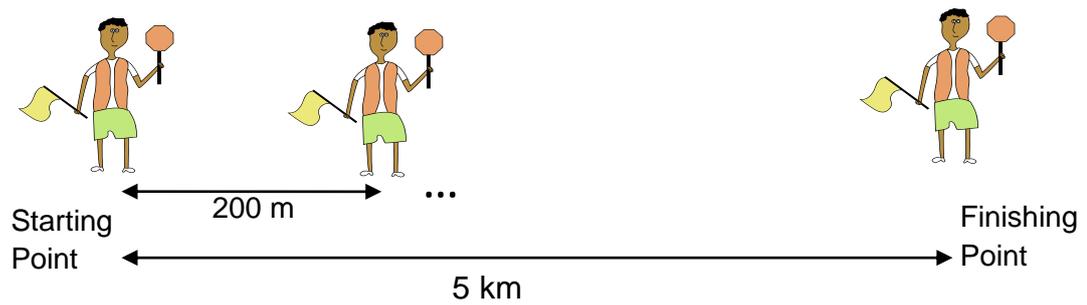
Answer: _____

End of Booklet B

(Go on to the next page)

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. (a) Express $1\dfrac{7}{9}$ as a decimal. Round off your answer to the nearest hundredth.

    (b) Use the following digits to form the smallest 5-digit even number.

| 5 | 9 | 1 | 8 | 3 |
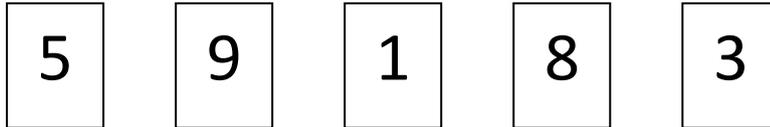
Answer:

(a)_____

(b)

_____

2. Pears are sold in packs of 5 for $1.95. One pear costs 65¢.

    What is the <u>least</u> amount of money Mrs Lim has to pay for 19 pears?

| 5 for $1.95 |
| 1 for 65¢ |

Ans: _____
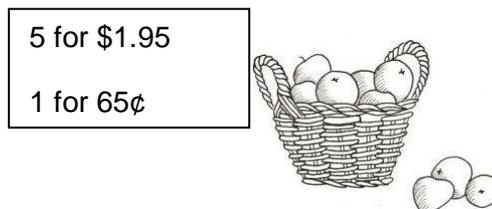
(Go on to the next page)

3. There are 15 women and 25 men in a shop. What percentage of the adults are

   women? Round off your answer to the nearest whole number.

Ans: _____

---

4. In the figure below, not drawn to scale, ABCD is a square and BEF is a straight line.
   Find ∠AEF.

Ans: _____
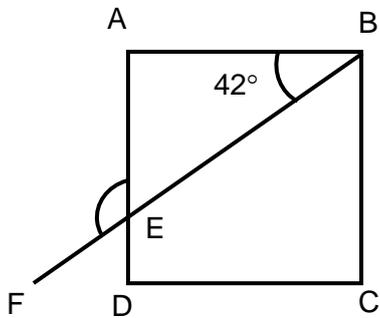
(Go on to the next page)

5. There were 5100 people in a shopping centre. 75% of them were children.

   How many adults were there?

   Ans: _____

_____

6. $\dfrac{3}{9}$ of the pupils in a cohort passed a Science test. If 36 pupils passed the test, how

   many pupils were there altogether?

   Ans: _____

7.   Sandra uses the recipe below to make pancakes.

To make 10 pancakes

- 2 eggs
- 1 cup of milk
- 1 cup of flour
- 5 teaspoons of sugar

How many teaspoons of sugar does Sandra need to make 72 pancakes?

Ans: _____

_____

8.   John is twice as heavy as Tam. Tam is 2 kg lighter than Sam. Sam's mass is 20 kg.

What is the mass of John?

Ans: _____

9. A rectangular tank 10 cm long, 6 cm wide and 18 cm high contains some water to a height of 14 cm.
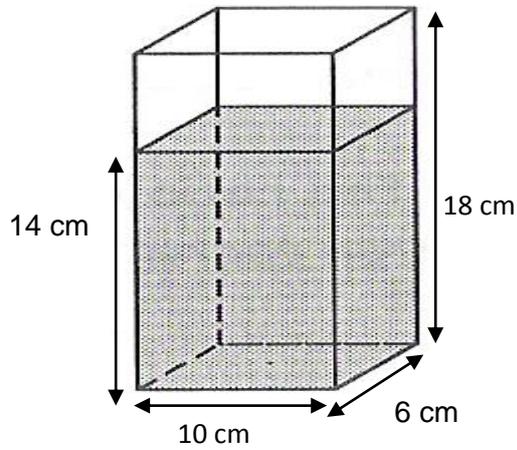
How many millilitres of water does Nadia have to pour out of the tank so that it becomes half full?

Ans: _____

10. A tap fills 15 identical tanks in 7 minutes.

How long will it take the same tap to fill 105 such tanks at the same rate?

Ans: _____

(Go on to the next page)

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.   In the figure, ABCD is a rectangle and AD = AE.
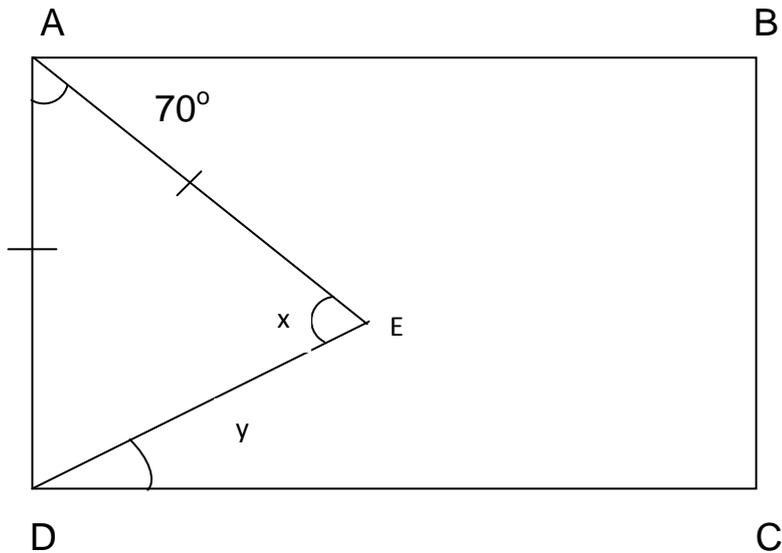
(a)   Find $\angle$ x.

(b)   Find $\angle$ y.

Ans : (a)_____[2]

(b)_____ [1]

(Go on to the next page)

12. The usual price of a refrigerator is $2480. During a sale, Mdm Tiffany bought the refrigerator at a discount of 20%. Then she had to pay 7% service charge.

    (a) How much was the discount?

    (b) How much did Mdm Tiffany pay for the refrigerator?

Answer:
(a) _____[1]

(b) _____[2]

13. The solid below is made up of some identical cubes.

The volume of the solid is 1000 cm³.

.
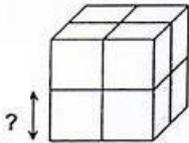
 (a) What is the volume of each cube?

(b) What is the length of one side of each cube?

Ans: (a) _____ [2]

(b) _____ [1]

(Go on to the next page)

14. Anis used 0.75 kg of flour to bake a pizza and 0.30 kg of flour to bake some cupcakes. She had 1.1 kg of flour left.

(a) How much flour did she use altogether? Leave your answer in kilogram.

(b) How much more flour would she need to get if she needs to set aside 2.5 kg of flour for the next use?

Ans: (a) _____ [1]

(b) _____ [2]

15.   A group of pupils were interviewed to find out their favourite bubble tea flavour. The pie chart shows the pupils' choices. Half of the pupils chose strawberry.

(a)   If 35 pupils chose vanilla, what was the total number of pupils interviewed?

(b)   What fraction of the pupils chose yam? Give your answer in the simplest form.

Ans: (a) _____[2]

(b) _____[2]
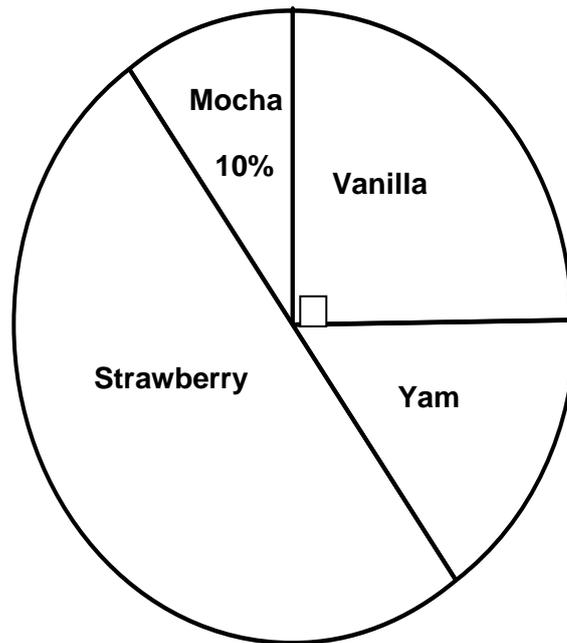
16.   In a week, Azam was given a pocket money of $8 each day from Monday to Friday and $10 each day for Saturday and Sunday.

He spent $\dfrac{4}{5}$ of his pocket money and saved the rest.

(a)   How much of his pocket money did he spend in a week?
(b)   If he needed to save $192, how many weeks would it take him?

Answer: (a) _____ [2]

(b)_____ [2]

17.   Wei Ming has 360 sticks. 90 of them are red. $\dfrac{2}{5}$ of the remaining sticks are yellow and the rest are blue.

(a)   How many yellow sticks are there?
(b)   How any more blue sticks than red sticks are there?

Ans: (a) _____[3]

(b)_____[2]

18.   The figure below shows an empty rectangular tank.

70 cm

80 cm
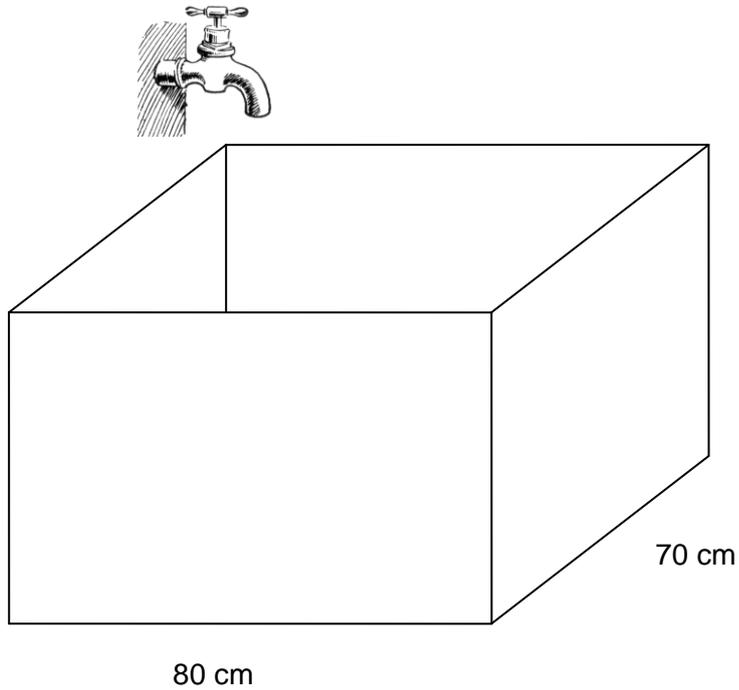
A tap is turned on to fill the tank with water at a rate of 2 litres per minute.

(a)   How many minutes will it take to fill the tank with 56 litres of water?

(b)   With 56 litres of water in the tank, what will be the height of the water level?

(1 litre = 1000 cm^3)

Ans : (a)_____[2]

(b)_____[3]

End of Paper

(Go on to the next page)

ANSWER KEY

P6 Foundation Paper 1 Booklet A

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

P6 Foundation Paper 1 Booklet B

21	a) 350	(A1)
	b) 68	(A1)
22.	$\dfrac{60}{100}$ x $125	(M1)
	= **$75**	(A1)
23.	$\dfrac{2}{5}$ x 360	(M1)
	=144	(A1)
24.	$180^0 - 125^0 = 55^0$	(M1)
	$180^0 - 55^0 - 65^0 = \mathbf{60^0}$	

(Go on to the next page)

		(A1)
25.	D $\quad$ S $\quad$ 20 $\quad$ 100 $\qquad$ 150-50 = 100	
	2u = 100-20	(M1)
	1u = 80 ÷2	
	= 40	
	40 + 20 = **60**	(A1)
26.	$7\frac{2}{5} - \frac{1}{4}$	(M1)
	$= 7\frac{3}{20}$	(A1)
	Or	
	7.4 – 0.25	

	= **7.15**	(M1)
		(A1)
27.	27 x 10 x 8 = **2160 cm3**	(M1) (A1)
28.	55min= 30 min +25min $5 + (25 x $0.20) = **$10**	(M1) (A1)

29.	Adults→7 units Children→5 unit
	
	Difference : 2 units →360
	
	         1 unit → 360 ÷ 2 = 180
	
	         5 units→180x5= **900**
	
	OR
	Adults→$\dfrac{12}{12}$ - $\dfrac{5}{12}$ = $\dfrac{7}{12}$
	
	Difference: $\dfrac{7}{12}$ - $\dfrac{5}{12}$ = $\dfrac{2}{12}$ →360
	
	         $\dfrac{1}{12}$ → 360÷2 =180
	
	         $\dfrac{5}{12}$ →180 x 5=**900**
		(M1)
		(A1)
		
		(M1)

		(A1)
30.	5000m ÷ 200 m = 25 25 + 1 = **26**	(M1) (A1)

ANSWER KEY

P6 Maths Foundation Paper 2

Deduct ½ mark from A marks for missing unit of measurement or error in unit of measurement.

1	(a) $1\frac{7}{9} \approx$ **1.78**	A1
	(b) **13 598**	A1
2	19 pears = 3 packs of 5 pears + 4 pears	
	3 packs of 5 pears → $1.95 x 3 = $5.85	M1
	4 pears→ 4 x $0.65 = $2.60	
	Total→ $5.85 + $2.60 = **$8.45**	A1
3	15 + 25 = 40	M1
	15/40 x 100% =37.5 ≈ **38%**	A1
4	$180 - 90 - 42 = 48^0$	(M1)
	$180 - 48 =$ **132^0**	(A1)
5	100% -75%= 25%	
	$\frac{25}{100}$ x 5100	(M1)
	= **1275**	(A1)
6	3 units = 36	
	1 unit = 36 ÷ 3 = 12	(M1)

	9 units = 9 x 12 = **108**	(A1)
7	10 pancakes →5 tsp sugar 1 pc→1/2 tsp 72 pc→1/2 x 72 = **36**	(M1) (A1)
8	 J T S 18kg / 2kg 20kg – 2kg = 18 18kg x 2 = **36kg**	(M1) (A1)
9	Half of tank height → 18 cm ÷ 2 = 9 cm Ht of water to be removed from tank → 14 cm – 9 cm = 5cm Vol of water pour out → 10 cm x 6 cm x 5 cm = 300 cm³ = **300 ml**	M1 A1
10	105 ÷ 15 = 7 7 x 7min = **49min**	M1 A1
11	a) $\angle x$ = (180° – 70°) ÷ 2	(M1)

	= **55°**	(A1)
	(b) $\angle y = 90° - 55°$ = **35°**	(A1)

12	(a) Discount → $\dfrac{20}{100}$ x \$2 480 = \$496
	
	 (b) Price after discount → \$2 480 - \$496 = \$1 984
	
	      Service charge → $\dfrac{7}{100}$ x \$1 984 = \$138.88
	
	      Paid → \$1 984 + \$138.88 = **\$2 122.88**
		.M ½
		 A ½
		
		 M 1
		
		 A1

13	(a) 1000 cm³ ÷ 8 = **125 cm³** (b) 5 cm x 5 cm x 5 cm = 125 cm³ Length = **5cm**	M1 A1 A1
14	(a) (0.75 + 0.30) kg = **1.05 kg** (b) 2.5 kg – 1.1 kg = **1.4 kg**	M ½ A ½ M1 A1
15	(a) ¼ of pupils = 35 total no of pupils = 35 x 4 = **140**	(M1) (A1)

	(b) % of vanilla = 100 % - 50% – 10% – 25% = 15% Fraction of pupils who chose yam = $\frac{15}{100}$ = $\frac{3}{20}$	(M1) (A1)
16	(a) Monday to Friday → $8 x 5 = $40 Saturday and Sunday → $10 x 2 =$20 Total → $40 + $20 = $60 Spent → $\frac{4}{5}$ x $60 **= $48** (b) Saved → $60 - $48 = $12 Weeks → $192 ÷ $12 **= 16**	 M1 A 1 M 1 A 1
17	(a) 360-90 = 270 $\frac{2}{5}$ X 270 = **108** (b) Blue: 360 – 90 – 108= 162 162-90 = **72**	M1 M1 A1 M1 A1

18	(a) Time to fill up 56 litres = 56 $l \div 2$ l/min	(M1)
	= **28 min**	(A1)
	(b) 70cm x 80 cm	
	= 5600 cm^2	(M1)
	Height of water = 56 000cm$^3 \div$ 5600cm^2	
	= **10 cm**	(M1)
		(A1)