



MARIS STELLA HIGH SCHOOL (PRIMARY)
TERM 1 WEIGHTED ASSESSMENT
PRIMARY 6 MATHEMATICS
3 MARCH 2023

17 questions
55 marks
Time: 1 h 30 min

NAME : _____

CLASS : PRIMARY 6 _____

INSTRUCTIONS TO CANDIDATES

1. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
 2. FOLLOW ALL INSTRUCTIONS CAREFULLY.
 3. ANSWER ALL QUESTIONS.
 4. SHOW YOUR WORKINGS CLEARLY AS MARKS ARE AWARDED FOR CORRECT WORKING.
 5. WRITE YOUR ANSWERS IN THIS BOOKLET.
- YOU ARE **ALLOWED** TO USE A CALCULATOR.

MARKS OBTAINED		
TOTAL	/ 55	Parent's Signature: _____
		Date: _____

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)

Do not write in this space.

1. (a) Write down the first common multiple of 4 and 6.

(b) Write down all the common factors of 15 and 20.

a) 4, 8, 12
6, 12

b) $\begin{array}{l} 15 \\ = 1 \times 15 \\ = 3 \times 5 \end{array}$

$\begin{array}{l} 20 \\ = 1 \times 20 \\ = 2 \times 10 \\ = 4 \times 5 \end{array}$

Answer: (a) 12

(b) 1, 5

2. Serene poured 3000 ml of apple juice into 4 identical bottles. How many litres of apple juice were there in one bottle?

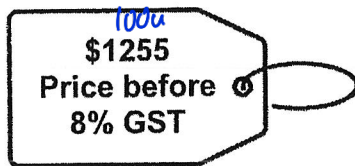
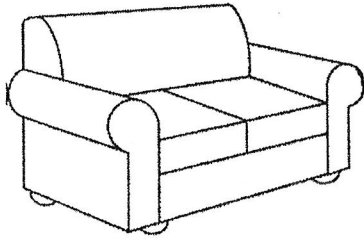
$3000 \text{ ml} = 3 \text{ l}$

$3 \text{ l} \div 4 = 0.75 \text{ l}$

Answer: 0.75 l

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3. Find the amount of ^{8u}GST for the sofa shown. The price shown below does **not** include GST.

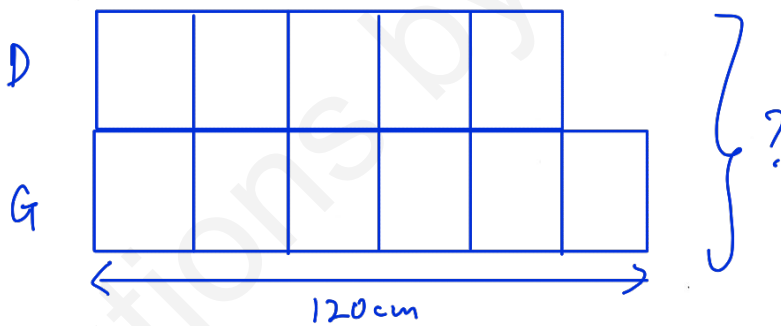


$$\frac{8}{100} \times 1255 = 100.40$$

Do not write in this space.

Answer: \$ 100.40

4. Dexter's height is ^{5u} $\frac{5}{6}$ of ^{6u}Gavin's height. Gavin is ^{11u}120 cm tall. Find their total height.



$$\frac{120}{6} \times 11 = 220$$

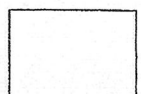
Answer: 220 cm

5. Meiling, Ahmad and Gopal had a total of 162 sweets. The ratio of the number of sweets Meiling had to the number of sweets Ahmad had to the number of sweets Gopal had was 2 : 3 : 4. How many sweets did Gopal have?

Do not write in this space.

M	:	A	:	G	:	Total	
2	:	3	:	4	:	9	
36	:	54	:	<u>72</u>	:	162	↙ x 18

Answer: 72



For Questions 6 to 17, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in the brackets [] at the end of each question or part-question. (45 marks)

Do not write in this space.

6. (a) Merry Cafe sold 25 999 ice cream bars last year. Express this number to the nearest ten.

- (b) Use all the digits 3, 4, 5, 6 to form

- (i) the smallest multiple of 2.
(ii) the greatest number between 5000 and 6000.

a) 25 999
 $\approx 26\ 000$

b) i) $\begin{array}{cccc} 3 & 4 & 5 & 6 \\ \hline \end{array}$
 ii) $\begin{array}{cccc} 5 & 6 & 4 & 3 \\ \hline \end{array}$

account for restrictions first

~~5000~~
 5001
 :
 5999
~~6000~~

Answer: (a) 26 000 [1]

(b) (i) 3456 [1]

(b) (ii) 5643 [1]

7. Lucas has \$1260 in his bank account. The bank pays him an annual interest of 2.5%. How much money will he have in his bank account after a year if he does not withdraw any of his savings?

Method 1 :

$$1260 \times \frac{2.5}{100} = 31.50$$

$$1260 + 31.50 = 1291.50$$

Method 2 :

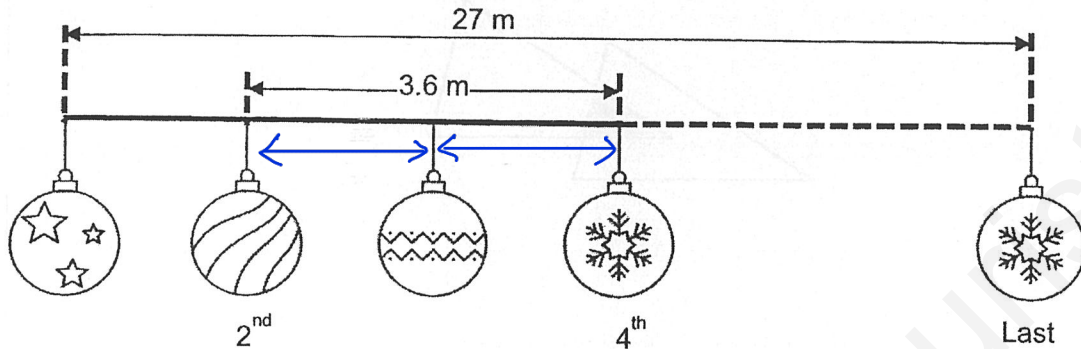
$$1260 \times \left(1 + \frac{2.5}{100}\right) = 1291.50$$

Answer: \$1291.50 [3]

8. Christmas ornaments were displayed in a straight line at equal distance apart. The distance between the 2nd and the 4th ornament was 3.6 m. The first ornament and the last ornament was 27 m apart. How many ornaments were there?

Do not write in this space.

confusion alert:
Do not take $3.6m \div 3$



$$3.6 \div 2 = 1.8$$

$$27 \div 1.8 = 15$$

There are 15 gaps.

$$15 + 1 = 16$$

* No. gaps
No. items

	1

Answer: 16 [3]

9. Grace had some money. She spent \$2200 on a watch and $\frac{1}{5}$ of her remaining money on some books. [She had $\frac{1}{4}$ of her money left.] How much money did she have at first?

Spent
2200
(11u)

Remain
5u

Books
1u

Left
4u

4 x 4
16u

$$16u - 5u = 2200$$

$$11u = 2200$$

$$1u = 2200 \div 11$$

$$= 200$$

$$16u = 16 \times 200$$

$$= 3200$$

Answer: \$3200 [3]

VTM - Remainder Concept & (IV)

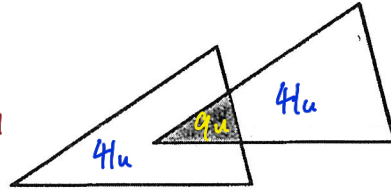
SCORE
(Go on to the next page)

$\frac{9}{50}$

10. The figure below shows 2 identical triangles. The shaded area is 18% of each triangle. Find the ratio of the shaded area to the area of the figure.

Do not write in this space.

Confusion alert :
Area of the figure
is NOT $50u + 50u = 100u$



$$\begin{aligned}\text{Required ratio} &= 9 : 41 + 9 + 41 \\ &= 9 : 91\end{aligned}$$

Answer: 9 : 91 [3]

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$$UTM - \text{No.} \times \text{Value} = \text{Total Value}$$

11. [Frank bought 3 more cookies than doughnuts] [Each cookie cost \$0.80 and each doughnut cost \$1.40.] [He spent \$30 less on the cookies than on the doughnuts] How many doughnuts did he buy?

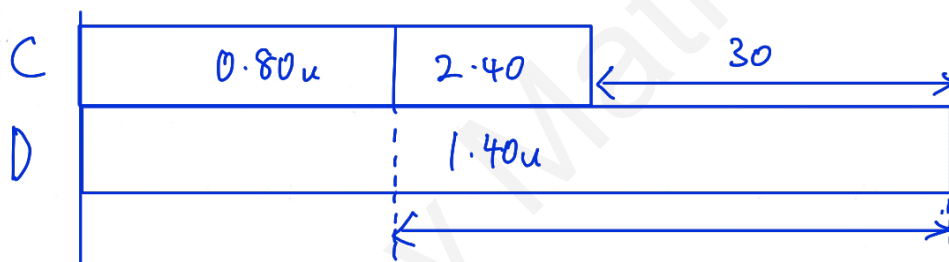
Do not write in this space.

	No. items	Value (\$)	Total Value (\$)
Cookies	$u+3$	0.80	$0.80u + 2.40$
Doughnuts	u	1.40	$1.40u$

When comparing diff, use models.

$$1.40u - 0.80u + 2.40 = 30$$

comparing total values,



$$1.40u - 0.80u = 30 + 2.40$$

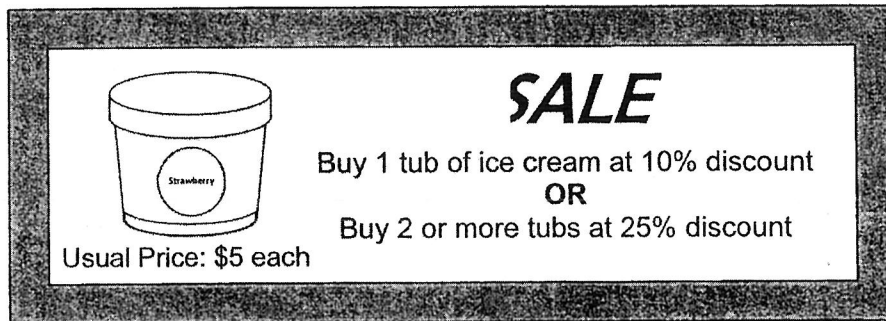
$$0.60u = 32.40$$

$$u = 32.40 \div 0.60 = 54$$

Answer: 54 [3]

12. At a sale, MSHP Supermarket sold tubs of ice cream as shown in the poster below.

Do not write in this space.



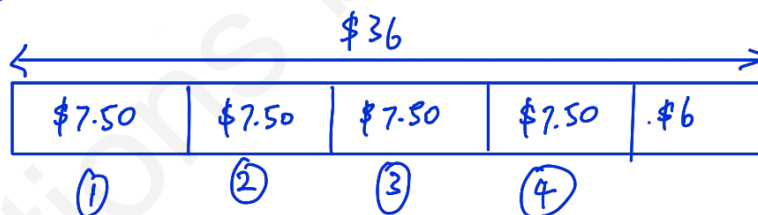
- (a) Nancy bought one tub of ice cream at the sale. How much did she pay?

$$5 \times \frac{90}{100} = 4.50$$

Answer: (a) \$4.50 [1]

- (b) Charles had \$36. What was the **maximum** number of tubs of ice cream he can buy with \$36?

$$2 \times 5 \times \frac{75}{100} = 7.50 \quad (2 \text{ tubs cost } \$7.50)$$



$$36 \div 7.50 = 4 \text{ R } 6$$

(He can buy 4 sets of 2 tubs and have \$6 left.
With the \$6, he can buy 1 more tub at \$4.50)

$$4 \times 2 + 1 = 9$$

Answer: (b) 9 [3]

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Remainder Concept (III)

13. Tom spent $\frac{1}{5}$ of his money on 7 notebooks and 4 pens. [The cost of each notebook is $2u$ twice the cost of each pen.] He bought some more pens with $\frac{3}{10}$ of his money. How many pens did he buy altogether?

Do not write in this space



$$7N, 4P \\ 18u$$

$$27P$$


$$7 \times 2u + 4 \times 1u = 18u$$

$$18u \div 2 = 9u$$

$$3 \times 9u = 27u$$

$$27u \div 1u = 27$$

$$27 + 4 = 31$$

Confusion alert: 
Need to add the 4 pens that have already been bought.

Answer: 31 [4]

14. ^B Daisy, Eve and Fiona had 720 stickers altogether. ^C Daisy gave 25% of her stickers to Eve and 35% of her stickers to Fiona. ^A In the end, each of the 3 girls had the same number of stickers. What is the difference in the number of stickers Eve and Fiona had at first?

Do not write in this space.

	D	E	F	Total
B	20u	3u	1u	24u
				720
C	-5u	+5u		
(1)	-7u		+7u	
A	8u	8u	8u	24u

(2)

$$24u = 720$$

$$1u = 720 \div 24$$

$$= 30$$

$$3u - 1u = 2u$$

$$= 2 \times 30$$

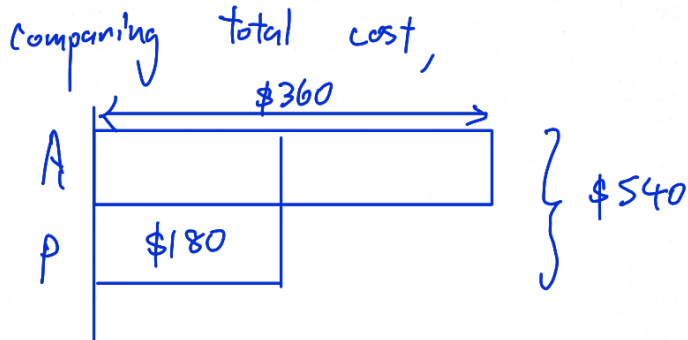
$$= 60$$

Answer: 60 [4]

15. Tim bought some cartons of apples and papayas.
 The cost of all the apples was twice that of all the papayas.
 The total cost of the apples and papayas was \$540.

Do not write in this space.

(a) How much was the cost of the apples?



$$540 \div 3 = 180$$

$$2 \times 180 = 360$$

Answer: (a) \$360 [2]

No. [The number of cartons of apples Tim bought was $\frac{3}{5}$ of the number of cartons of papayas bought. Each carton of apples was \$28 more than each carton of papayas.]

Value

(b) How many cartons of papayas did he buy?

* make no. items the same

	No. items	Total cost
A	3u	360
P	5u	180
A	1u	120
P	1u	36

$\div 3$ (on A row)
 $\div 5$ (on P row)

1u of A

1u of P

	28
	28
	28
	84

$$120 - 36 = 84$$

$$84 \div 28 = 3$$

$$5 \times 3 = 15$$

Answer: 15 [3]

VTM - Equal Concept

16. There are 836 students in Everland Primary School. $\frac{7}{10}$ of the boys and $\frac{7}{8}$ of the girls take the school bus to school. [The number of boys who do not take the school bus is twice the number of girls who do not take the school bus] How many girls are there in the school?

Do not write in this space.

	Boys	Girls	Total
Total	10×2 $20u$	8×3 $24u$	$44u$
Take bus	7×2 $14u$	7×3 $21u$	
Don't take bus (compared portion)	3×2 $6u$ 2	1×3 $3u$ 1	

$$44u = 836$$

$$1u = 836 \div 44$$

$$= 19$$

$$24u = 24 \times 19$$

$$= 456$$

456

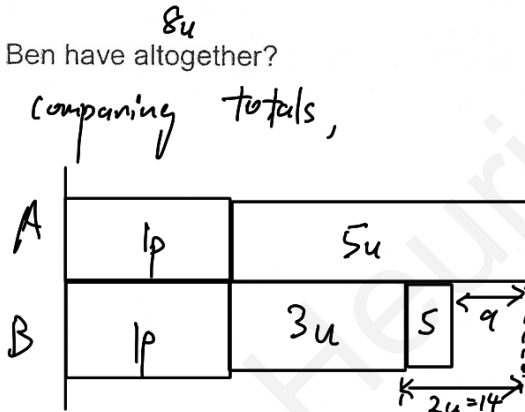
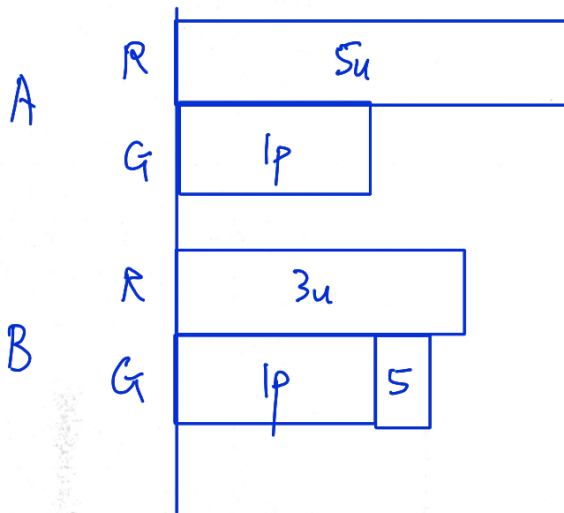
Answer: _____ [5]

17. Adam, Ben and Clive each has some green and red pens.

- In total, Adam has 9 more pens than Ben and Ben has 5 more green pens than Adam.
- The ratio of the number of red pens Adam has to the number of red pens Ben has is 5 : 3.
- The ratio of the number of green pens to the number of red pens Clive has is 3 : 1.

Do not write in this space.

(a) How many red pens do Adam and Ben have altogether?



$$\begin{aligned} 5u - 3u &= 5 + 9 & 8u &= 56 \\ 2u &= 14 \\ u &= 7 \end{aligned}$$

Answer: (a) 56 [3]

(b) Each statement below is either true, false, or not possible to tell from the information given. For each statement, put a tick (✓) to indicate your answer.

	True	False	Not possible to tell
Among the three boys, Adam has the most number of pens.			✓
In total, Clive has an odd number of pens.		✓	

$G : R : \text{Total}$ [2]

$3 : 1 : 4$ $4 \times \text{—}$

↑
always even

End of Paper