# 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 | | |
|---|---|---|
| | | Parent's Signature: |
| TOTAL | / 55 | _____ |
| | | 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)

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

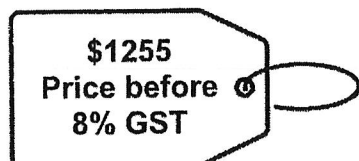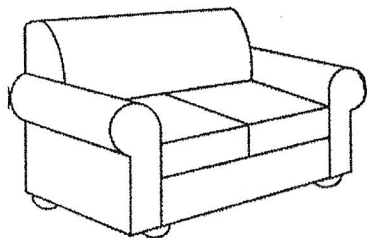   **(b)** Write down all the common factors of 15 and 20.

Answer: (a) _____

(b) _____

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

Answer: _____ $\ell$

1

SCORE

(Go on to the next page)

3. Find the amount of GST for the sofa shown. The price shown below does **not** include GST.

$1255
Price before
8% GST

Answer: $ _____

---

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

Answer: _____ _____ cm

2

SCORE [   ]

(Go on to the next page)

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?

Answer: _____

SCORE

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.

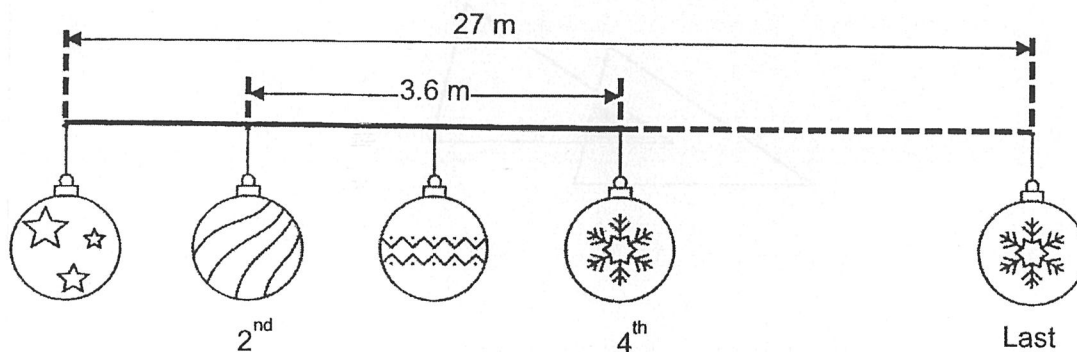Answer: (a) _____ [1]

(b) (i) _____ [1]

(b) (ii) _____ [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?

Answer: _____ [3]

4

SCORE

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**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?

27 m

3.6 m

2nd          4th          Last

Answer: _____ [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?

Answer. _____ [3]

5

SCORE

**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.
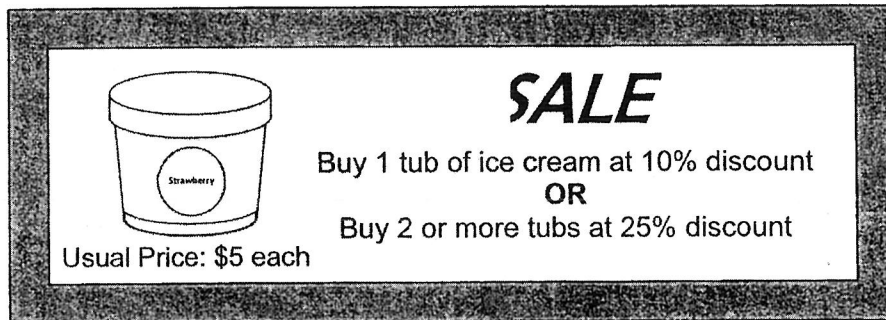
Answer: _____ [3]

SCORE

(Go on to the next page)
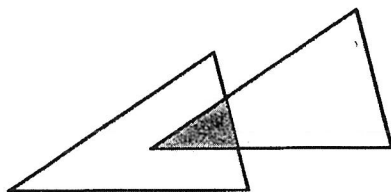
**11.** Frank bought 3 more cookies than doughnuts. Each cookie cost $0.80 and each doughnut cost $1.40. He spent $30 less on the cookies than on the doughnuts. How many doughnuts did he buy?

Answer: _____ [3]

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

SALE

Buy 1 tub of ice cream at 10% discount
OR
Buy 2 or more tubs at 25% discount

Strawberry

Usual Price: $5 each

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

Answer: (a) _____ [1]

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

Answer: (b) _____ [3]

8

SCORE

(Go on to the next page)

**13.** Tom spent $\frac{1}{5}$ of his money on 7 notebooks and 4 pens. The cost of each notebook is 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?

Answer: _____ [4]

**14.** Daisy, Eve and Fiona had 720 stickers altogether. Daisy gave 25% of her stickers to Eve and 35% of her stickers to Fiona. 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?

Answer: _____ [4]

SCORE

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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.

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

Answer: (a) _____ [2]

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.

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

Answer: _____ [3]

SCORE
(Go on to the next page)

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?

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.

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

Answer: (a) _____ [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. | | | |

[2]

End of Paper

SCORE

## MARIS STELLA HIGH SCHOOL (PRIMARY)
## PRIMARY 6 MATHEMATICS
## TERM 2 WEIGHTED ASSESSMENT

## 11 MAY 2023

17 questions

55 marks

Total Time: 1 hour and 30 minutes

NAME : _____ (     )

CLASS : PRIMARY 6 _____

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ANSWER ALL QUESTIONS.

| MARKS OBTAINED | Parent's Signature: |
|---|---|
| TOTAL: _____ / 55 | _____ <br> Date: <br> _____ |

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)
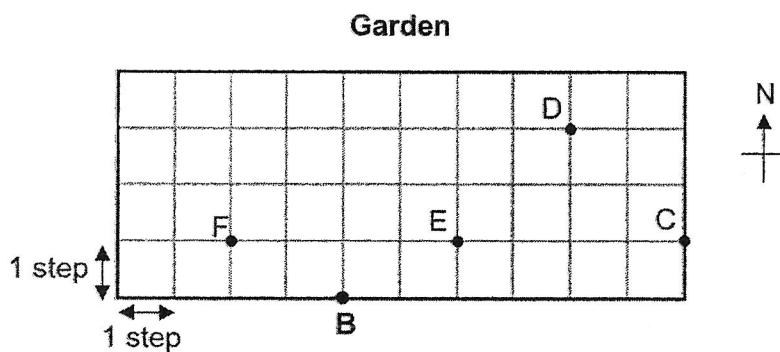
1. Use all the digits 0, 2, 5, 3 to form

    **(a)** the smallest 4-digit odd number

    Answer: **(a)** _____

    **(b)** the greatest multiple of 5

    Answer: **(b)** _____

2. John was strolling in a garden and he started his stroll at position **B** facing north.

**Garden**



John took 2 steps west then 3 steps north and finally 2 steps west.

**(a)** Mark '**X**' on the grid to indicate John's final position.

**(b)** Which letter (C, D, E or F) is south-east of John's final position?

Answer: **(b)** _____

1
SCORE
(Go on to the next page)

3. Mrs Lee spent $\frac{2}{7}$ of her salary on a bag. The bag cost \$320. How much was Mrs Lee's salary?
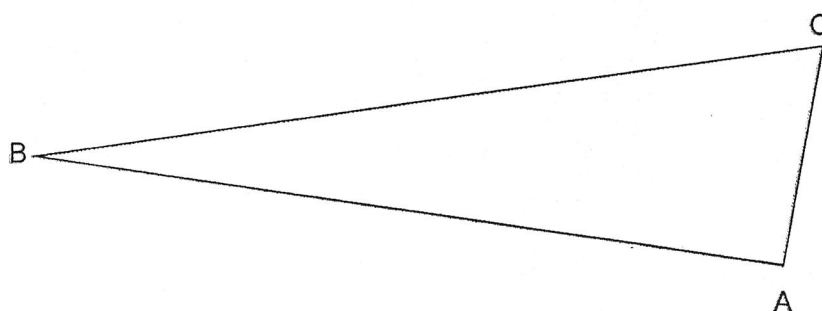
Answer: \$ _____

4. Measure and write down

(a) the length of BC.

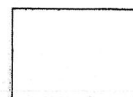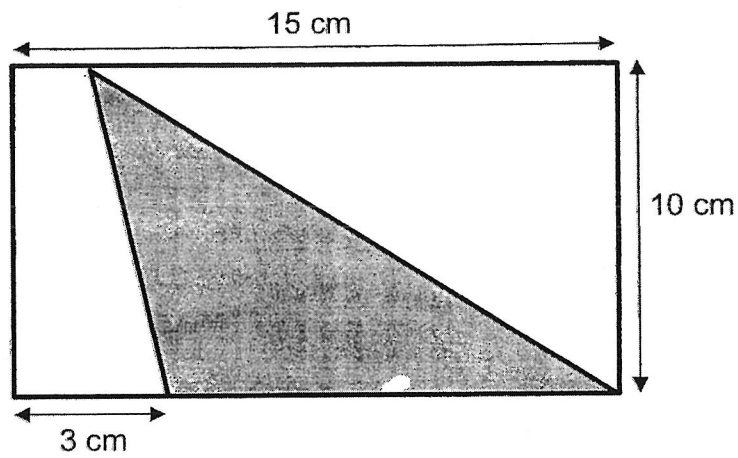(b) the size of ∠ABC.



Answer: (a) _____ cm

(b) _____ °

2

SCORE

(Go on to the next page)

**5.** Find the area of the shaded triangle.

Answer: _____ cm²

(Go on to the next page)

SCORE

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.   AC and BD are straight lines. $\angle s = \angle t$. $\angle s$ is $65°$.
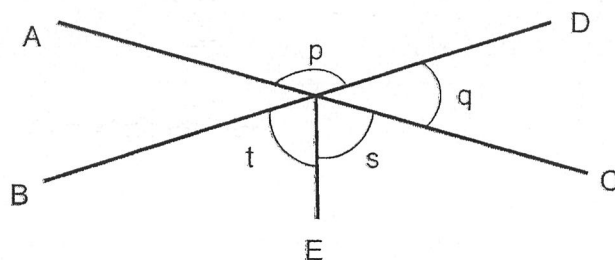


(a) Find $\angle p$.

Answer: **(a)** _____ [1]

(b) Find $\angle q$.

Answer: **(b)** _____ [2]

7.    There were some men and women at a concert. 24 women left and as a result, the percentage of men at the concert increased from 50% to 70%. How many people were at the concert at first?

Answer: _____ [3]

8. The number of 50-cent coins to the number of 20-cent coins that Liam kept in a box is in the ratio 7 : 4. Each day, he took out $1 worth of 50-cent coins and replaced them with $1 worth of 20-cent coins. After 12 days, he had an equal number of 20-cent coins and 50-cent coins in his box. How many 50-cent coins were left in the box after 12 days?
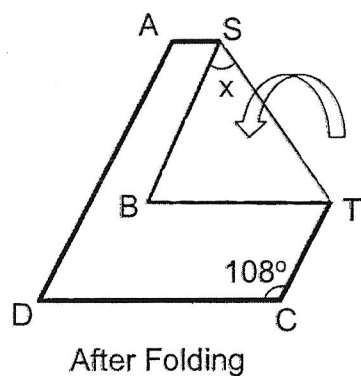
Answer: _____ [3]

9. Sara and Maddy had an equal amount of money at first. Sara received $60 from her aunt and Maddy spent $332. Then Maddy had $\frac{1}{9}$ of what Sara had. How much in total did the two of them have in the end?
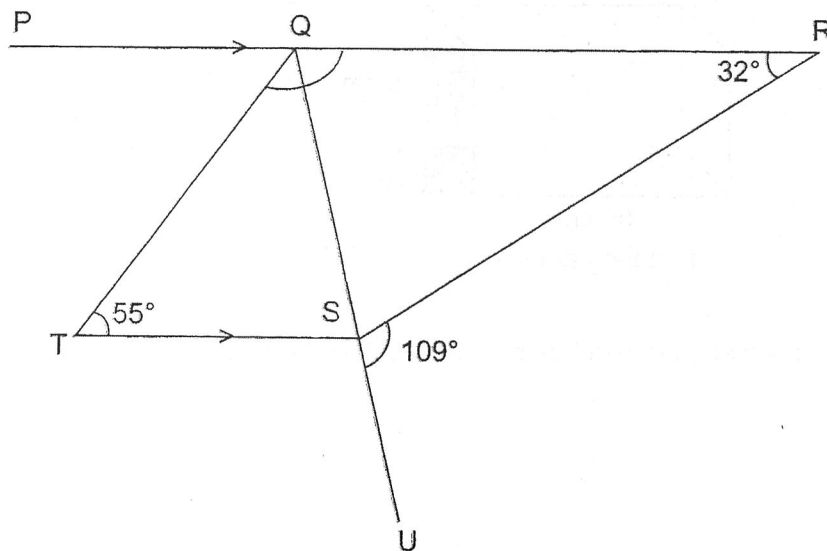
Answer: _____ [3]

10. ABCD is a piece of paper in the shape of a parallelogram. It is folded along line ST as shown below, where SB = BT. Find ∠x.

After Folding

Answer: _____ [3]

SCORE
(Go on to the next page)

**11.** PQR and QSU are straight lines.



**(a)** Find ∠TQR.

Answer: **(a)** _____ [1]

**(b)** Find ∠TSU.

Answer: **(b)** _____ [2]

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SCORE

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**12.** Meihua has some 2-cm cubes. She packs the cubes in the rectangular tank shown below.
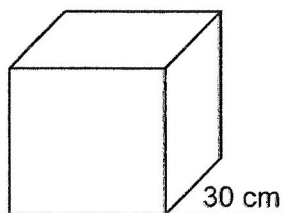
35 cm

20 cm

50 cm
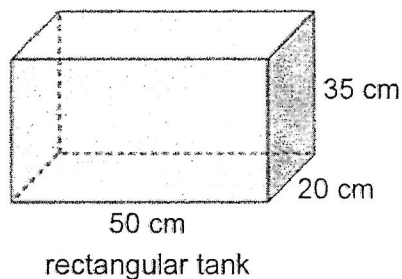
rectangular tank

**(a)** At most, how many 2-cm cubes can she pack in the tank?

Answer: **(a)** _____ [2]

**(b)** Meihua removed all the cubes and filled the rectangular tank with water to the brim. The water from the rectangular tank was then poured into a cubical container of sides 30 cm to its brim. How many litres of water was left in the rectangular tank?
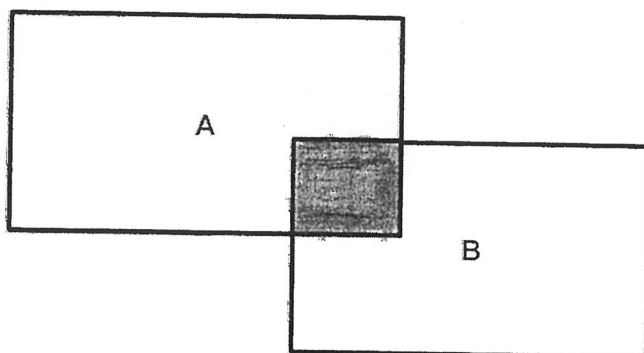


30 cm

cubical container

Answer: **(b)** _____ [2]

SCORE

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**13.** The figure below shows 2 overlapping rectangles, A and B. The ratio of the area of rectangle A to the area of rectangle B is 10 : 9. 20% of rectangle A is shaded. The total unshaded area of rectangles A and B is 450 cm². What is the area of the shaded part?

Answer: _____ [4]

SCORE
(Go on to the next page)

14. Joey and Peter bought some cupcakes. Each of them spent $18. Joey used a voucher that gave her a 20% discount and she got 3 cupcakes more than Peter.

(a) How many cupcakes did Joey get?
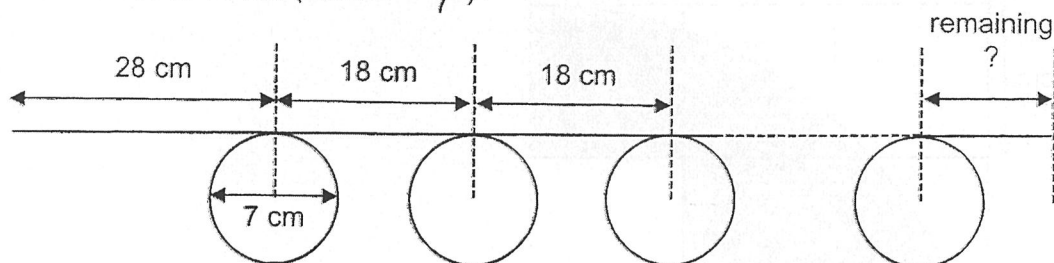
(b) Find the discount given for each cupcake.

Answer: (a) _____ [2]

(b) _____ [2]

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SCORE

**15.** Mr Yip has 5 m of wire. He bends the wire to form as many identical circles as possible at an equal distance apart in the pattern as shown below. The diameter of each circle is 7 cm. The distance from the centre of one circle to the centre of the next circle is 18 cm. (Take $\pi = \frac{22}{7}$)

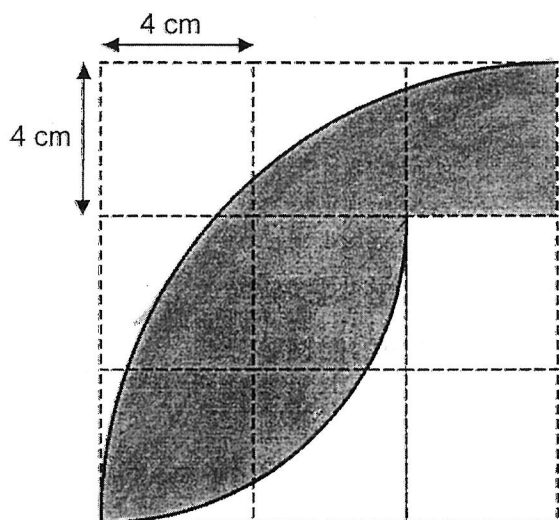(a) What is the length of the remaining wire?

Answer: (a) _____ [4]

(b) How many circles did he form?

Answer: (b) _____ [1]

SCORE

**16.** The figure below shows 2 quarter circles of 2 different sizes on a square grid. The side of each small square is 4 cm. Find the area of the shaded part. (Taking π = 3.14)

4 cm

4 cm

Answer: _____ [5]

SCORE

**17.** Study the pattern below.



Figure 1  Figure 2  Figure 3
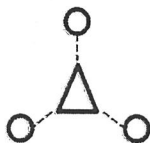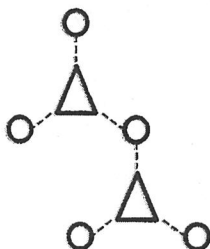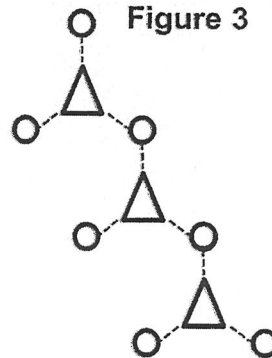
| Figure number | Number of dotted lines | Number of circles | Number of triangles |
|---|---|---|---|
| 1 | 3 | 3 | 1 |
| 2 | 6 | 5 | 2 |
| 3 | 9 | 7 | 3 |
| 4 | 12 | 9 | 4 |
| 5 | a(i) ................ | a(ii) ................ | 5 |

(a) Complete the table for **a(i)** and **a(ii)**. [1]

(b) Which figure contains 114 dotted lines?

Answer: **(b)** _____ [2]

(c) A figure has 51 triangles. How many circles are there in this figure?

Answer: **(c)** _____ [2]

End of Paper

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YEAR      :   2023
LEVEL     :   PRIMARY 6
SCHOOL    :   MARIS STELLA HIGH SCHOOL (PRIMARY)
SUBJECT   :   MATHEMATICS
TERM.     :   TERM 1 WEIGHTED ASSESSMENT

## TERM 1 WEIGHTED ASSESSMENT

| | | | |
|---|---|---|---|
| Q1 | (a) 12 <br> (b) 1, 5 | Q2 | $3000 \div 4 = 750ml$ <br> $= 0.75l$ |
| Q3 | $100\% \rightarrow \$1255$ <br> $1\% \rightarrow \$12.55$ <br> $8\% \rightarrow \$100.40$ | Q4 | D = 5u <br> G = 6u <br> Total = D + G <br> G = 6u = 120cm <br> 1u = 20cm <br> 11u : 220cm |
| Q5 | Total = M + A + G <br> = 2u + 3u + 4u <br> = 9u <br> = 162 <br> 1u = 18 <br> G = 4u <br> = 72 | Q6 | (a) <br> $25\,999 \approx 26\,000$ <br><br> (b) <br> (i) 3456 <br> (ii) 5643 |
| Q7 | $100\% \rightarrow \$1260$ <br> $1\% \rightarrow \$12.60$ <br> $0.5\% \rightarrow \$6.30$ <br> $2.5\% \rightarrow \$31.50$ <br> $\$1260 + \$31.50 = \$1291.50$ | Q8 | Gaps between $2^{nd}$ and $4^{th}$ = 2gaps <br> = 3.6m <br> 1 gap = 1.8m <br> $27 \div 1.8 = 15$ gaps <br> $15 + 1 = 16$ |
| Q9 | $\frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$ <br> $\frac{1}{16} \times 5 = \frac{5}{16}$ <br> $\frac{16}{16} - \frac{5}{16} = \frac{11}{16}$ <br> $\frac{1}{16} = \$200$ <br> Total $= \frac{16}{16} = \$3200$ | Q10 | $\frac{18}{100} = \frac{9}{50}$ <br> 1un = 100% - 18% = 82% <br> 2un = 164% <br> Shaded : Unshaded <br> 18 : 164 + 18 <br> 18 : 182 <br> 9 : 91 |
| Q11 | $0.8 \times 3 = 2.4$ <br> $30 + 2.4 = 32.4$ <br> $1.4 - 0.8 = 0.6$ <br> $32.4 \div 0.6 = 54$ | Q12 | (a) $90\% \times 5 = 4.50$ <br> (b) $75\% \times 10 = 7.50$ <br> $36 \div 7.5 = 4R6$ <br> $4 \times 2 = 8$ <br> $8 + 1 = 9$ |
| Q13 | $7N + 4P = 14P + 4P$ <br> $= 18p$ <br> $1N = 2P$ <br> $7N = 14P$ <br> $27P + 4P = 31P$ | Q14 | $25\% \rightarrow \frac{1}{4}$ <br> $35 \rightarrow \frac{7}{20}$ <br> $720 \div 3 = 240$ <br> $240 \div 8 = 30$ <br> E = 3u = 90 <br> $90 - 30 = 60$ |

| Q15 | (a) 3u = 540 <br> 1u = 180 <br> 2u = 360 <br> (b) Cost of A = 360 <br> Cost of P = 180 − 5u <br> 1u of A = 120 <br> 1u of P = 236 <br> 3 x 5 = 15 | Q16 | $\frac{3}{10}$ of B = $\frac{3}{12}$ of G <br> 836 ÷ 22u = 38 <br> 38 x 12 = 456 |
|------|------|------|------|
| Q17 | 2u = 14 <br> 1u = 7 <br> 8u = 56 | | |

2

YEAR : 2023
LEVEL : PRIMARY 6
SCHOOL : MARIS STELLA HIGH SCHOOL
SUBJECT : MATHEMATICS
TERM. : TERM 2 WEIGHTED ASSESSMENT

| Q1 | (a) 2035<br>(b) 5320 | Q2 | Garden<br><br>(b) F |
|---|---|---|---|
| Q3 | $\frac{2}{7}$ of total salary = 320<br>$\frac{1}{7}$ of total salary = 160<br>$\frac{7}{7}$ of total salary = \$1120 | Q4 | (a) 10.8cm<br>(b) 16 |
| Q5 | $\frac{1}{2}$ x 12 x 10 = 60cm² | Q6 | (a) 65 + 65 = 130°<br>(b) $\frac{360-130-130}{2}$ = 50° |
| Q7 | M : W     M : W<br>15u : 35u    7p : 3p<br>21p : 21p<br>15u = 21p<br>35u − 168 = 21p<br>35u − 15u = 20u<br>20u = 168<br>10u = 84 | Q8 | 7 x 12 = 84<br>3u = 84<br>1u = 28<br>7u = 196<br>196 − 28 = 172 |
| Q9 | 8u = 332 + 60<br>= 392<br>1u = 49<br>10u = \$490 | Q10 | 180 − 108 = 72<br>X = $\frac{180-72}{2}$<br>= 54° |
| Q11 | (a) 189 − 32 = 148<br>360 − 55 − 32 − 148 = 125<br>(b) 360 − 148 − 109 = 103° | Q12 | (a) 50 ÷ 2 = 25<br>20 ÷ 2 = 10<br>35 ÷ 2 = 17R1<br>25 x 10 x 17 = 4250<br>(b) Capacity of rectangle tank = 50 x 20 x 35 = 35 000<br>30 x 30 x 30 = 27 000<br>35 000 − 27 000 = 8000<br>8000 ÷ 1000 = 8L |

Pg 3

| | | | |
|---|---|---|---|
| **Q13** | A + C : B + C<br>10 : 9<br>$\frac{1}{2}$ x 10 = 2<br>A : B : C<br>8 : 7 : 2<br>8u + 7u = 15u<br>15u = 450<br>1u = 30<br>2u = 30 x 2<br>= 60cm$^2$ | **Q14** | $\frac{80}{100}$ x 18 = 14.40<br>18 − 14.40 = 3.60<br>Cost of 3 cupcakes = $3.60<br>Cost of 1 cupcake = 1.2<br>a) 10 ÷ 1.2 = <u>15</u><br>15 − 3 = 12<br>$\frac{18}{12}$ = 1.50<br>$\frac{18}{15}$ = 1.20<br>1.50 − 1.20 = <u>$0.30</u> (b) |
| **Q15** | a) Circumference = $\pi$D<br>=$\frac{22}{7}$ x 7<br>= 22cm<br>500 − 28 = 472<br>1 set = 22cm + 18cm = 40cm<br>As gaps are 1 less than circle,<br>472 + 18 = 490<br>$\frac{490}{40}$ = 12R10<br>Ans: 10cm<br>b) 12 | **Q16** | Area of big quadrant = $\frac{1}{4}$ x $\pi$ x r x r<br>=$\frac{1}{4}$ x 3.14 x 12 x 12<br>= 113.04<br>Area of small quadrant = $\frac{1}{4}$ x $\pi$ x r x r<br>=$\frac{1}{4}$ x 3.14 x 8 x 8<br>Area of small square = 8 x 8 = 64<br>Area of A = 64 − 50.24<br>= 13.76<br>Area of whole square = 12 x 12<br>= 144<br>Area of B = 144 − 113.04<br>= 30.96<br>Area of 2 small squares = (4 x 4) x 2<br>= 32<br>Area of shaded part = 144 − (32 + 30.96 + 13.76)<br>= 67.28cm$^2$ |
| **Q17** | (a)<br>(i) 15<br>(ii) 11<br><br>(b)<br>114 ÷ 3 = 38<br><br>(c)<br>(51 x 2) + 1 = <u>103</u> | | |

END

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