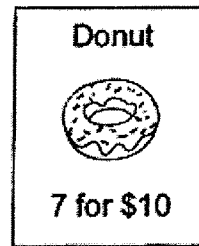
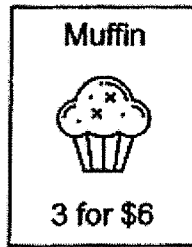


ACS 2021 Prelims Last 5 Questions

13. At a bakery, muffins and donuts were sold at the prices shown below.



Amy had some money. She spent $\frac{1}{2}$ of her money to buy some donuts and the remaining of her money on some muffins. She bought 54 more donuts than muffins. How much money did Amy have at first?

Ans: _____ [4]

14. Hansel and Sherman had some blue and green stickers. $\frac{3}{5}$ of Hansel's stickers were blue while $\frac{2}{3}$ of Sherman's stickers were blue. Hansel gave $\frac{3}{4}$ of his blue stickers to Sherman. In the end, $\frac{7}{10}$ of Sherman's stickers were blue and Hansel had 165 stickers left.

(a) How many blue stickers did Hansel give Sherman?

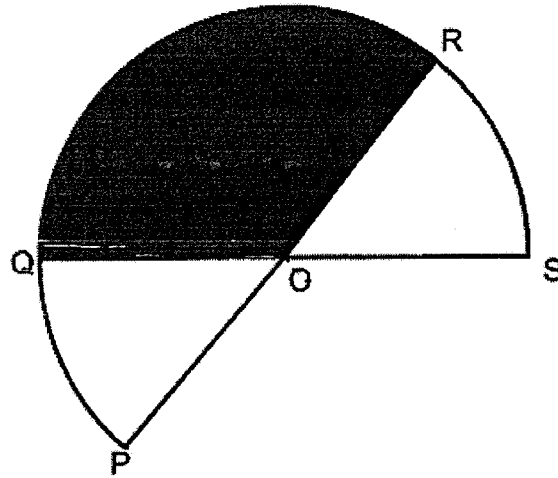
(b) How many stickers did Sherman have in the end?

Ans : (a) _____ [2]

(b) _____ [2]

--

15. OPQRS is part of a circle of diameter 40 cm. OPQR and OQRS are semi-circles. The area of the shaded part OQR is 420 cm^2 and the perimeter of the shaded part OQR is 78 cm.



- (a) Find the area of the figure OPQRS.
 (c) Find the perimeter of the figure OPQRS.

Take $\pi = 3.14$.

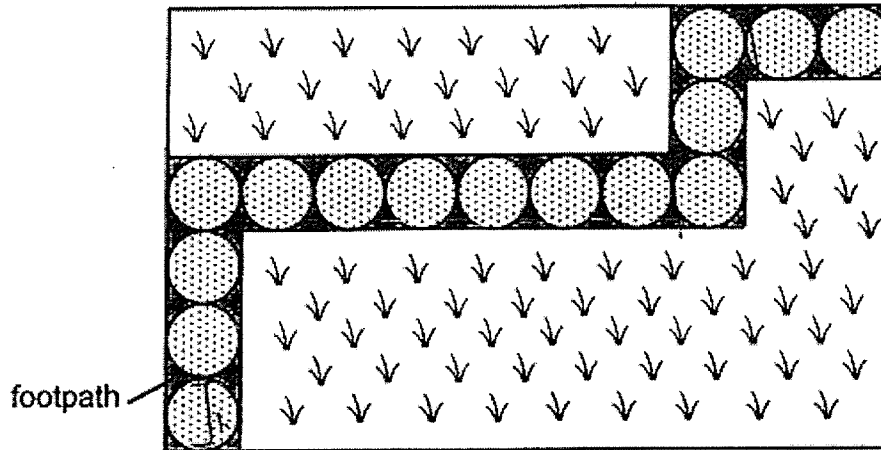
Ans: (a) _____ [2]

(b) _____ [2]

16. The ratio of the number of marbles Ryan had to the number of marbles Audrey had at first was 2 : 7. After Ryan bought another 20 marbles and Audrey gave away 80 marbles, the ratio of the number of marbles Ryan had to the number of marbles Audrey had became 1 : 3. How many marbles did Audrey have at first?

Ans : _____ [4]

17. The figure below shows a rectangular field with a perimeter of 48 m. A footpath cuts through the field as shown below. The footpath is tiled with 15 identical circular concrete tiles. Each tile is in contact with the ones next to it.



- (a) What is the diameter of each concrete circular tile?
- (b) Find the area of the field not covered by the footpath.

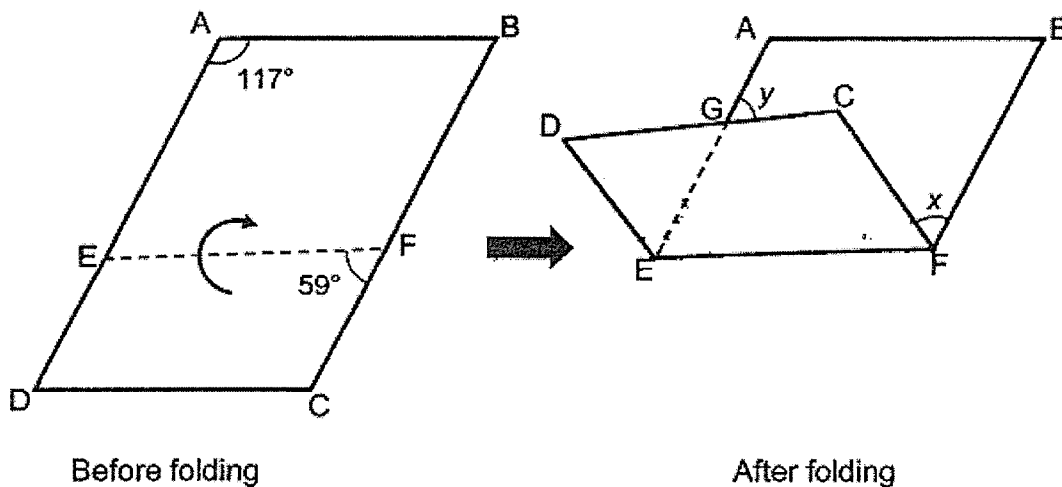
Ans: (a) _____ [2]

(b) _____ [3]

End of Paper 2

13. Jeremy had a piece of paper ABCD in the shape of a parallelogram. He folded it along the line EF as shown below.

Do not write in this space



- (a) Find $\angle x$.
 (b) Find $\angle y$.

Ans: (a) _____ [1]
 (b) _____ [3]



14. Mrs Lim prepared 160 chicken wings and some nuggets for a party. At one point during the party, an equal number of chicken wings and nuggets were eaten. 25% of the chicken wings and 20% of the nuggets were left. She then increased the number of chicken wings. After that, there was a total of 65 chicken wings.

Do not write
in this space

- (a) How many nuggets did Mrs Lim prepare for the party?
- (b) What was the percentage increase in the number of chicken wings after the same number of chicken wings and nuggets were eaten?

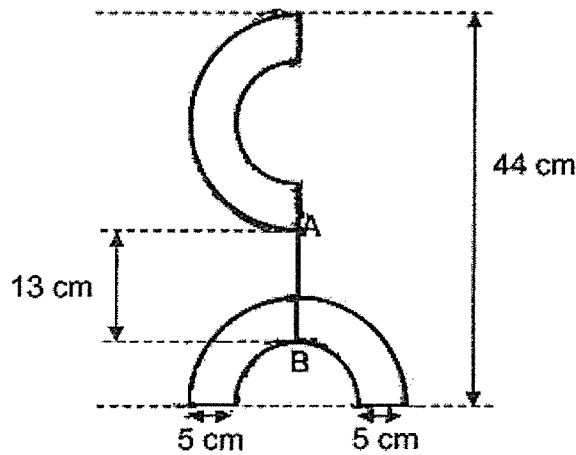
Ans: (a) _____ [3]

(b) _____ [2]



15. Benson uses some wire to make the figure as shown. He made 2 identical wire structures and joined them with a piece of wire AB. Each wire structure was formed by a large semi-circle, a small semi-circle and 2 straight lines.

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- (a) What is the radius of a small semi-circle?
- (b) Find the length of wire used to make the figure.
Take $\pi = 3.14$

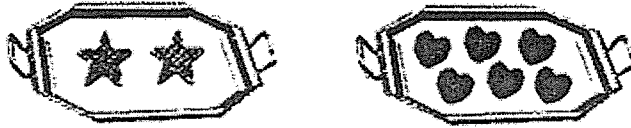
Ans: (a) _____ [2]

(b) _____ [2]



16. Cathy and David each had a piece of dough of the same mass at first. Cathy divided her dough into equal parts of mass 90 g and for each part, she used it to bake 2 star-shaped cookies. David also divided his dough into equal parts of mass 150 g and for each part he used it to bake 6 heart-shaped cookies. There were 72 more heart-shaped cookies than star-shaped cookies in the end.

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- (a) How many cookies did Cathy and David bake altogether?
- (b) David packed his cookies into 22 boxes. Some boxes contained 5 cookies while the rest contained 9 cookies. How many boxes contained 9 cookies?

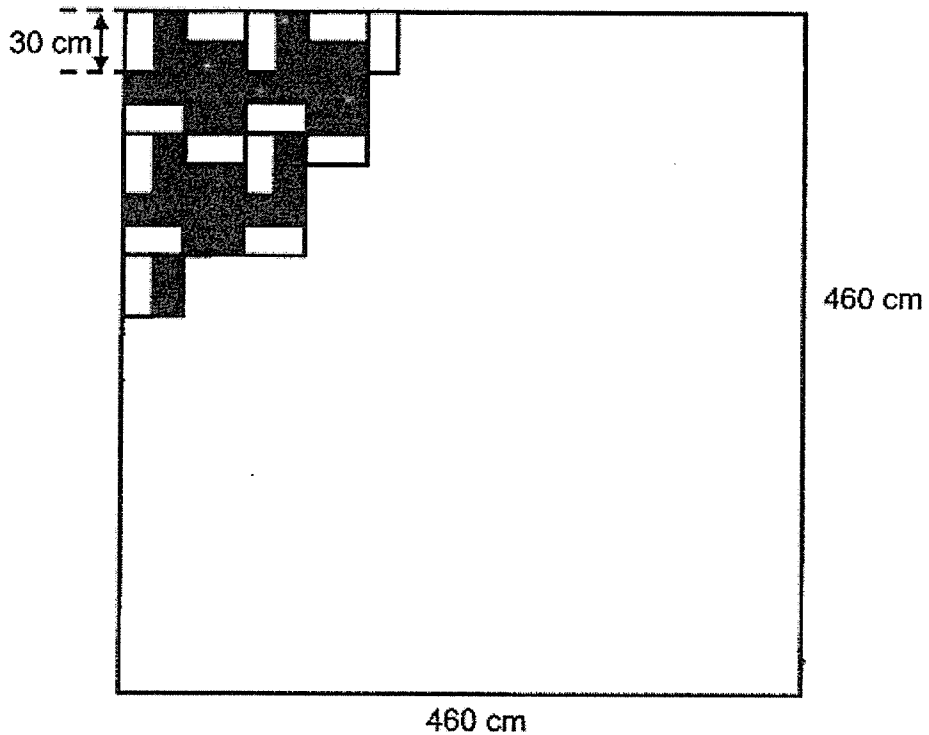
Ans: (a) _____ [3]

(b) _____ [2]



17. Mr Lee tries to cover a square floor with as many rectangular tiles of the same size as possible that follow a pattern as shown. The tiles are either white or grey.

Do not write in this space



- (a) What is the greatest possible number of tiles that Mr Lee can use to cover the floor?
- (b) Of the greatest possible number of tiles that Mr Lee can use to cover the floor, how many of the tiles are grey tiles?

Ans: (a) _____ [2]

(b) _____ [2]

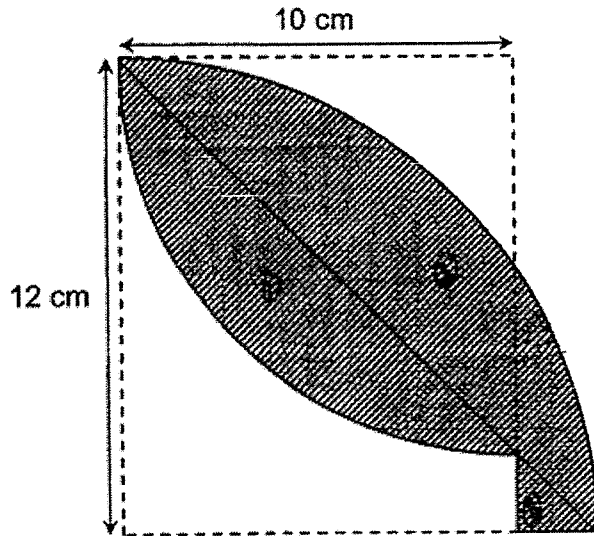


END OF PAPER 2

Henry Park 2021 Prelims Last 5 Questions

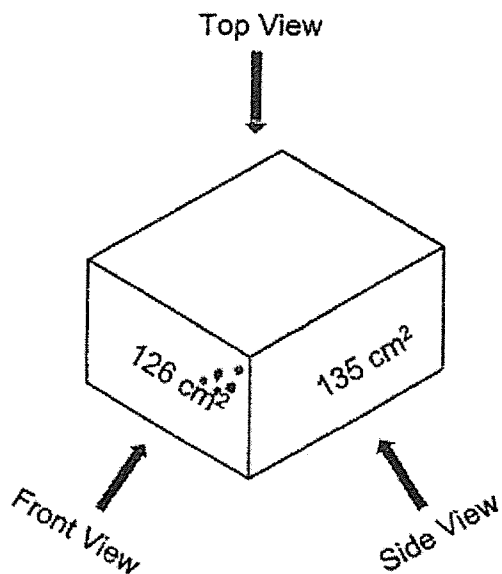
- 13 The outline of the shaded figure below is formed by quarter circles and straight lines. Find the area of the shaded figure.
(Take $\pi = 3.14$)

Do not write
in this space



Ans: _____ [3]

- 14 A cuboid is shown below. The length, breadth and height are whole numbers in cm. The area of the face seen from the front view is 126 cm^2 . The area of the face seen from the side view is 135 cm^2 . The volume of the cuboid is less than 5000 cm^3 .



- (a) Find the area of the face seen from the top view.
- (b) Pamela painted all the faces of the cuboid. She then cut the cuboid into 1-cm cubes. How many of these cubes have 1 of the faces painted?

Ans: (a) _____ [2]

(b) _____ [2]

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in this space



15 The first three figures of a pattern are shown below.

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in this space

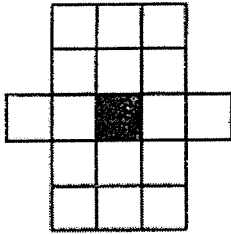


Figure 1

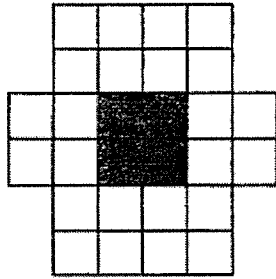


Figure 2

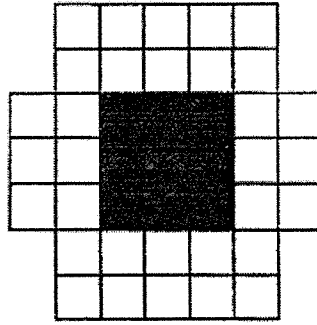


Figure 3

The table shows the number of white and grey squares used for each figure.

Figure Number	1	2	3	4
Number of white squares	16	24	32	
Number of grey squares	1	4	9	

[1]

- (a) Fill in the table for Figure 4.
- (b) How many grey squares are used for Figure 169?
- (c) Find the total number of white and grey squares in Figure 169.

Ans: (b) _____ [1]

(c) _____ [2]

16 Blue stickers were sold in packets of 15 each. Green stickers were sold in packets of 40 each. Renee bought 5 packets of blue stickers and some packets of green stickers. Fatimah bought 13 packets of blue stickers and some packets of green stickers. Both girls bought the same total number of packets of stickers.

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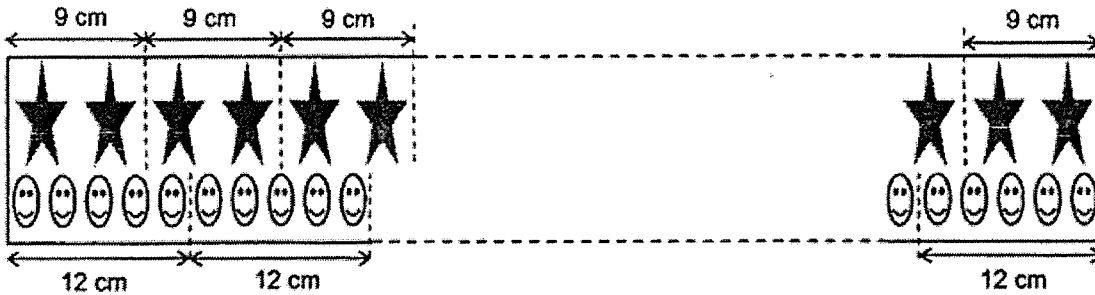
- (a) How many more green stickers did Renee buy than Fatimah?
- (b) After Renee used $\frac{3}{5}$ of her green stickers and Fatimah used half of her green stickers, they both had 452 green stickers left altogether. How many blue and green stickers did Fatimah buy altogether?

Ans: (a) _____ [1]

(b) _____ [4]

17 Mary decorated a rectangular piece of cardboard using stars and smiley faces. On the top part, there were 2 stars for every 9 cm of length of the cardboard. On the bottom part, there were 5 smiley faces for every 12 cm. The stars and smiley faces were placed at an equal distance apart as shown.

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- (a) A total of 552 stars and smiley faces were used to decorate the cardboard. How many smiley faces were there?
- (b) Next, Mary wants to tie a ribbon under each smiley face as shown below. Each ribbon measures 6 cm long.



Given that ribbons were sold in rolls of 80 cm each, how many rolls of ribbons does Mary need to buy?

Ans: (a) _____ [3]

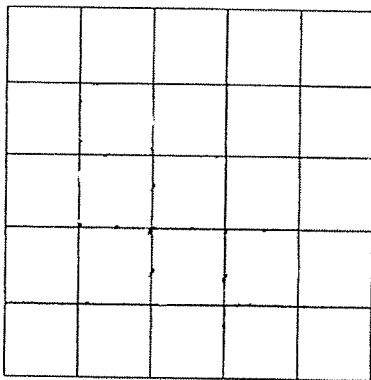
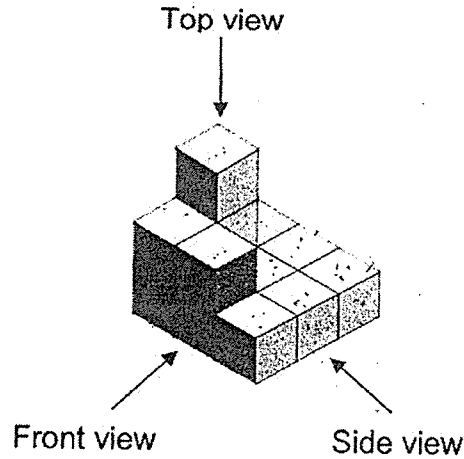
(b) _____ [2]



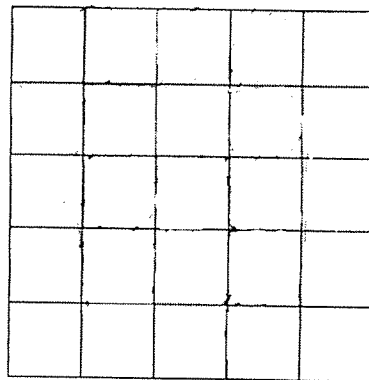
MGS 2021 Prelims Last 5 Questions

- 13 The solid below is made up of 13 1-cm cubes.
- (a) Draw the Front view and Top view of the solid in the grid provided.
- (b) The whole solid is completely dipped into a pot of red paint. Find the total area of the solid that has red paint.

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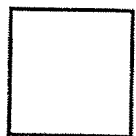


Front view [1]

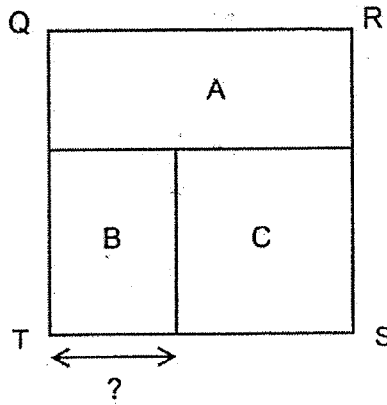


Top view [1]

Ans: (b) _____ [2]

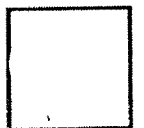


- 14 The square QRST is made up of two rectangles and a square.
 The ratio of the area of Rectangle A to the area of Rectangle B is 5 : 3.
 The ratio of the area of Rectangle B to the area of Square C is 2 : 3.
 The area of square QRST is 625 cm^2 . Find the breadth of Rectangle B.



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Ans : _____ [4]

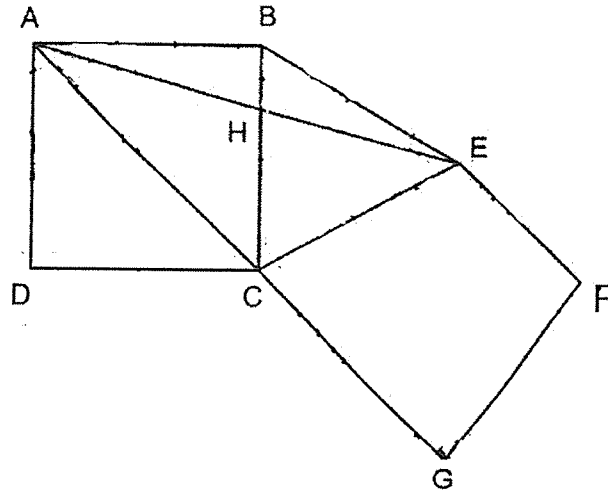


15 ABCD is a square and BCE is an equilateral triangle.

AEFG is a trapezium and AG is parallel to EF.

(a) Find $\angle EAC$.

(b) Find $\angle CEF$.



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Ans: (a) _____ [2]

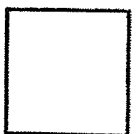
(b) _____ [1]

(c) The figure above is not drawn to scale. Each of the statements below is either true, false or not possible to tell from the information given.

For each of the statement, put a tick (\checkmark) to indicate your answer.

Statement	True	False	Not possible to tell
ABEC is a trapezium.			
$\angle CEF$ is greater than $\angle EFG$.			
$\angle ECG + \angle FGC = 180^\circ$			

[2]



16 The figure is made up of shaded and unshaded squares.

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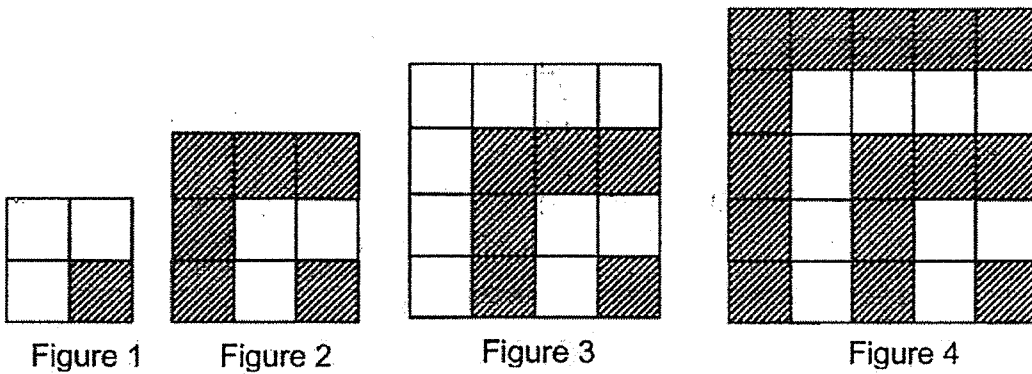
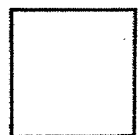


Figure number	Number of shaded squares	Number of unshaded squares	Total number of squares
1	1	3	4
2	6	3	9
3	6	10	16
4	15	10	25
5	(ai) _____	(aii) _____	36

(a) Complete the table for Figure 5. [1]

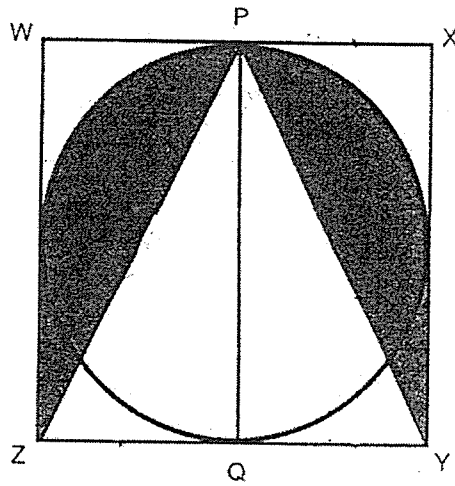
(b) There are a total of 81 squares. How many shaded and unshaded squares are there?

Ans: (b) Shaded _____ Unshaded _____ [3]

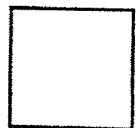


- 17 The figure below shows a circle enclosed in a square, WXYZ, of side 40 cm. WP = PX and ZQ = QY. Find the area of the shaded parts. (Take $\pi = 3.14$)

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Ans: _____ [5]



Nan Chiau 2021 Prelims Last 5 Questions

- 13** Sam received \$0.90 more pocket money than John every day. They each spent \$1.80 per day and saved the rest of their pocket money. After many days, John saved \$74.40 and Sam saved \$130.20.
- (a) How many days did John take to save \$74.40?
- (b) How much pocket money did both boys receive altogether each day?

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Ans: (a) _____ [2]

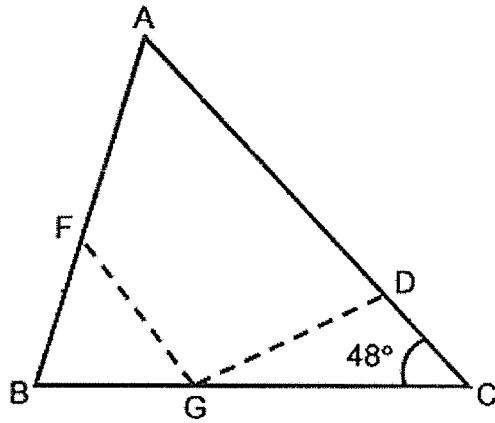
(b) _____ [2]

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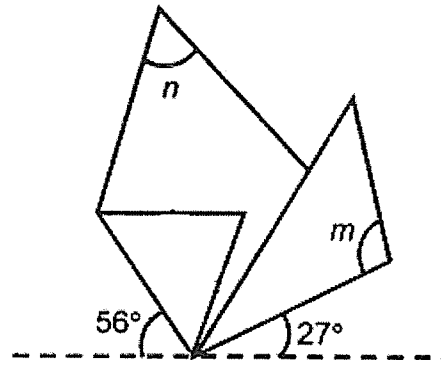
14 Alice has a triangular piece of paper ABC. She folded it along the lines FG and DG as shown below. BGC is a straight line. $BF = BG$.

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- (a) Find $\angle m$.
- (b) Find $\angle n$.



Before folding



After folding

Ans: (a) _____ [2]

(b) _____ [2]

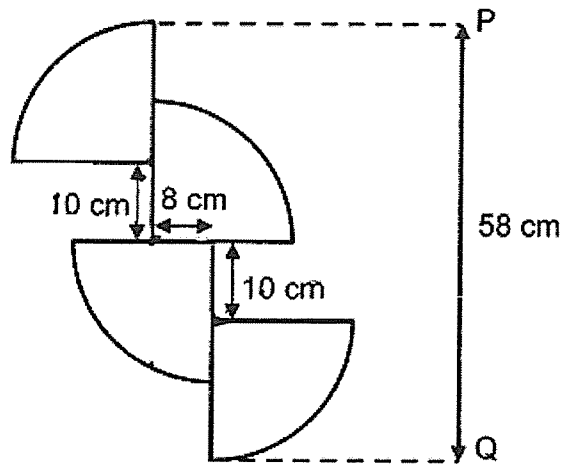
- 15 Celina spent $\frac{5}{9}$ of her money on 36 cupcakes and 32 muffins. The price of one cupcake was thrice as much as the price of one muffin. She then used $\frac{1}{6}$ of her money to buy more cupcakes. She spent a total of \$187.50 on all the cupcakes. How much did she spend on the muffins?

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Ans: _____ [5]

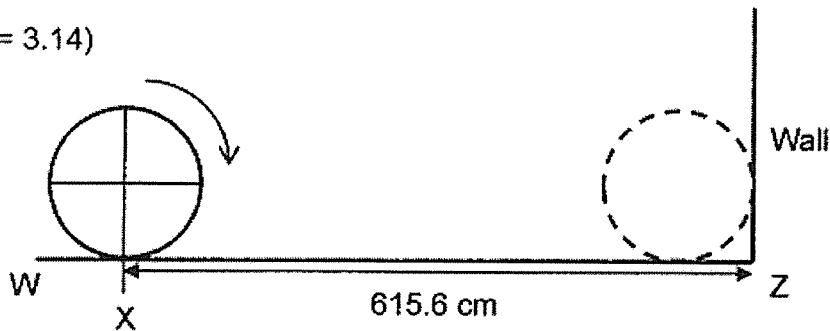
16 The figure is formed by 4 identical quarter circles. PQ is 58 cm.

Do not write in this space



- (a) Find the radius of the quarter circle.
- (b) Find the perimeter of the figure.
- (c) A circular wheel is formed by the 4 identical quarter circles. The wheel turned along the straight line WZ and reached the wall as shown below. The distance between point X and point Z is 615.6 cm. How many turns did the wheel make?

(Take $\pi = 3.14$)



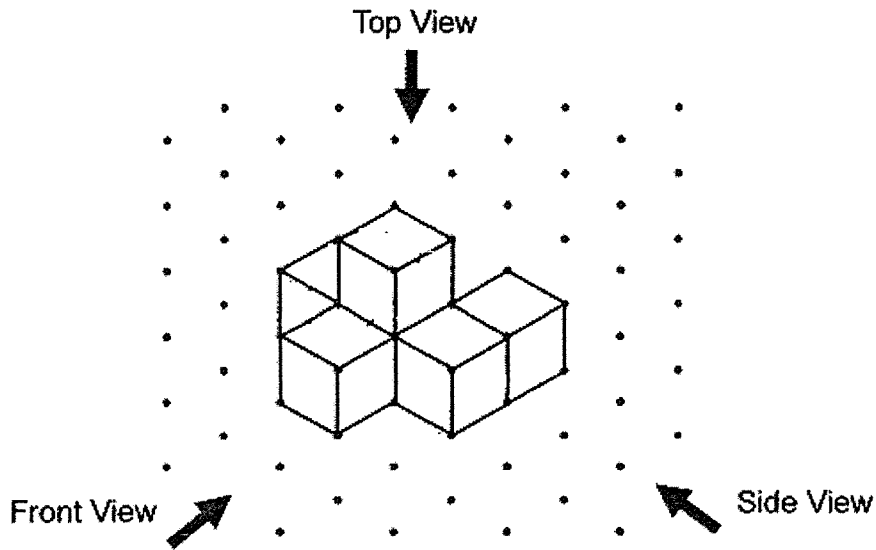
Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

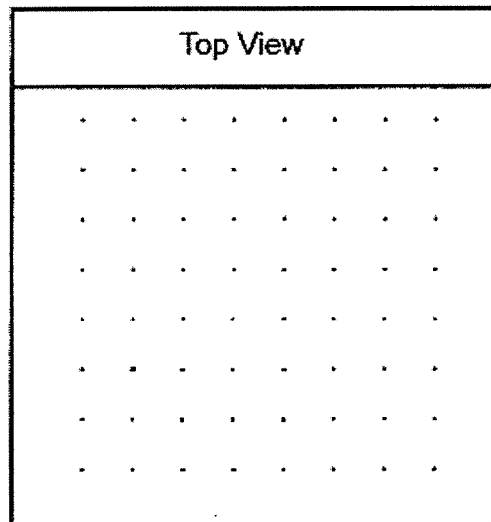
17 Megan stacked six 1-cm cubes together to form the solid below.

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- (a) Draw the top view of the solid in the grid below.
Drawing of the top view is as seen from the front view only.

[1]

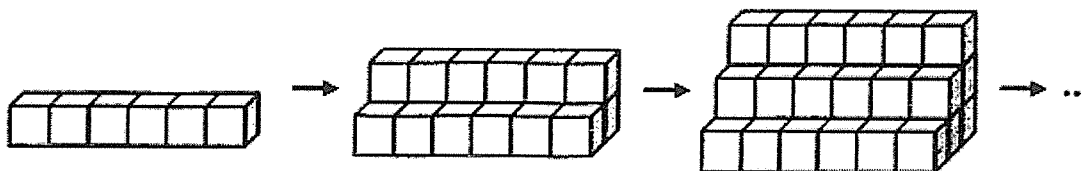


- (b) Megan painted the whole solid, including the base, red. How many of the 6 cubes had exactly four of their faces painted red?

Ans: (b) _____ [1]

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in this space

- (c) Megan rearranged the cubes to form the following figure. She wanted to build a set of steps with more 1-cm cubes. The figures below show how she built the steps.



If Megan continued building the steps in this way, what would be the height of the set of steps that had 168 cubes?

Ans: (c) _____ [3]

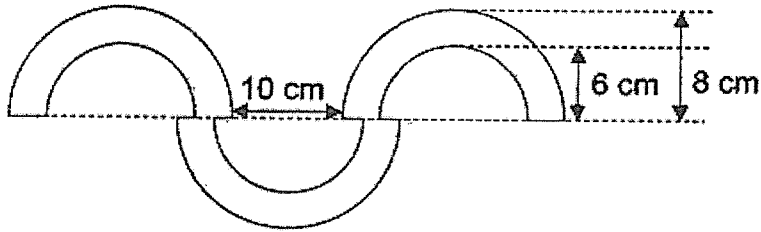
End of Paper

Nanhua 2021 Prelims Last 5 Questions

13. The figure below is made up of straight lines and semi-circles of radii 6 cm and 8 cm. Using the calculator value of π ,

Do not write in this space

- (a) find the area of the figure.
- (b) find the perimeter of the figure.
Round your answers to 2 decimal places.



Ans: (a) _____ [2]

(b) _____ [3]

14. A pack of trading cards contained 7 normal cards and 2 special cards. Weihua and John each bought a box of 40 packs of card. After opening their cards, they decided to trade with each other for the cards they wanted. 3 normal cards were traded for each special card. After trading, Weihua was left with a total of 384 cards.

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(a) How many cards did John have in the end?

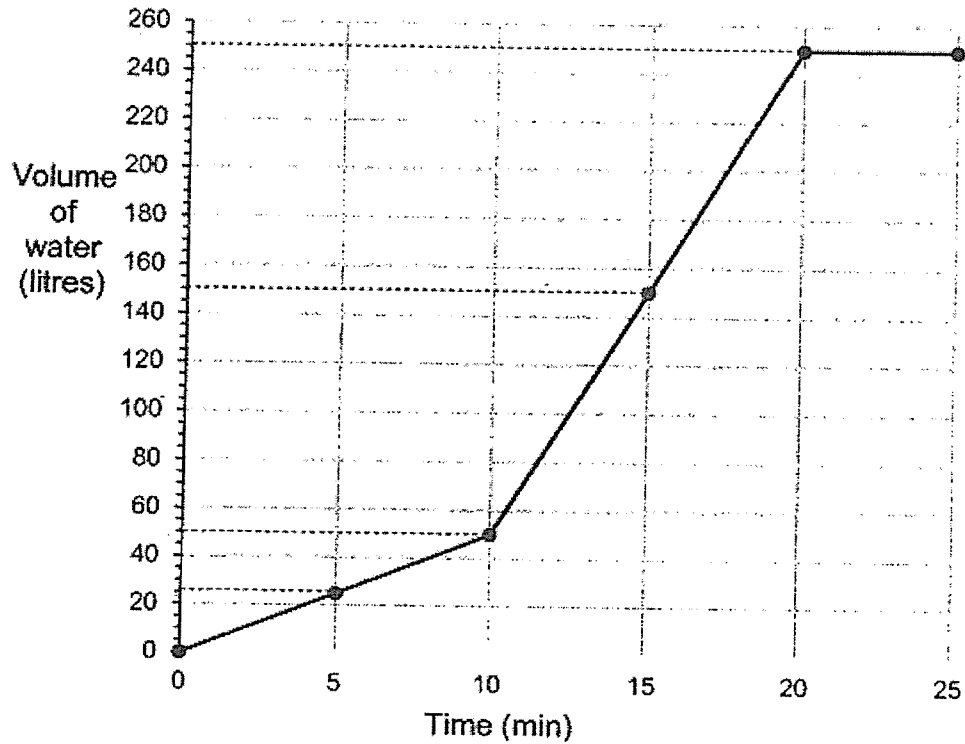
(b) How many special cards did Weihua have in the end?

Ans: (a) _____ [2]

(b) _____ [2]

15. A tank was filled with some water. A tap was turned on and water flowed into the tank at a constant rate. After some time, another tap was turned on. Both taps were turned off after the tank was filled to the brim. The line graph shows the volume of water in the tank over this period of time.

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- (a) At which minute was the second tap turned on?
 (b) How many litres of water flowed out from the second tap every minute?

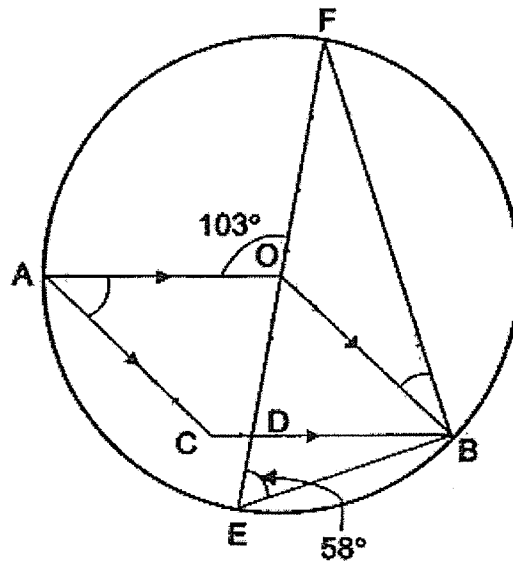
Ans: (a) _____ [1]

(b) _____ [2]

16. In the figure below, Point O is the centre of the circle.

EOF is a straight line. AOBC is a rhombus. $\angle FEB = 58^\circ$. $\angle AOF = 103^\circ$.

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this space



(a) Find $\angle FBO$.

(b) Find $\angle OAC$.

Ans: (a) _____ [3]

(b) _____ [1]

17. White squares and black squares are used to form a pattern. The first four figures are shown below.

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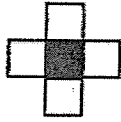


Figure 1

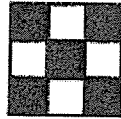


Figure 2

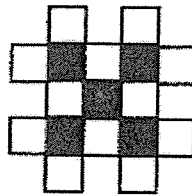


Figure 3

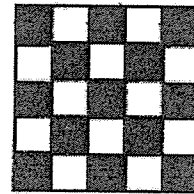


Figure 4

- (a) The table below shows the number of white squares and black squares for the first four figures. Complete the table for Figure 5.

Figure Number	1	2	3	4	5
Number of black squares	1	5	5	13	13
Number of white squares	4	4	12	12	(i)
Total number of squares	5	9	17	25	(ii)

- (b) How many white squares are there in figure 10?
- (c) A figure in the pattern has a total of 441 black and white squares. What is the Figure Number?

Ans: a) (i) _____

(ii) _____ [1]

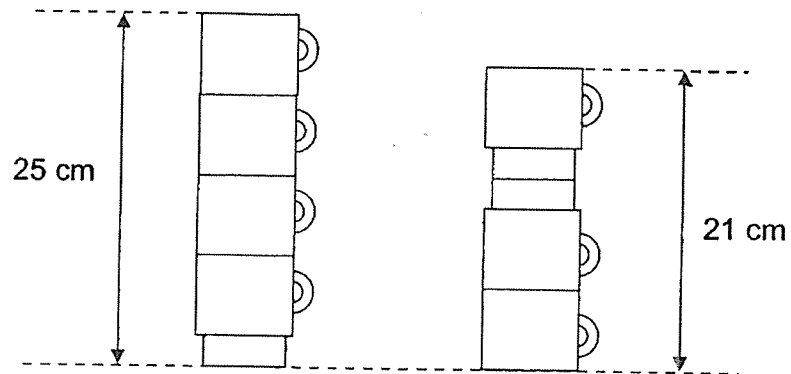
b) _____ [2]

c) _____ [2]

----- End of Paper 2 -----

Nanyang 2021 Prelims Last 5 Questions

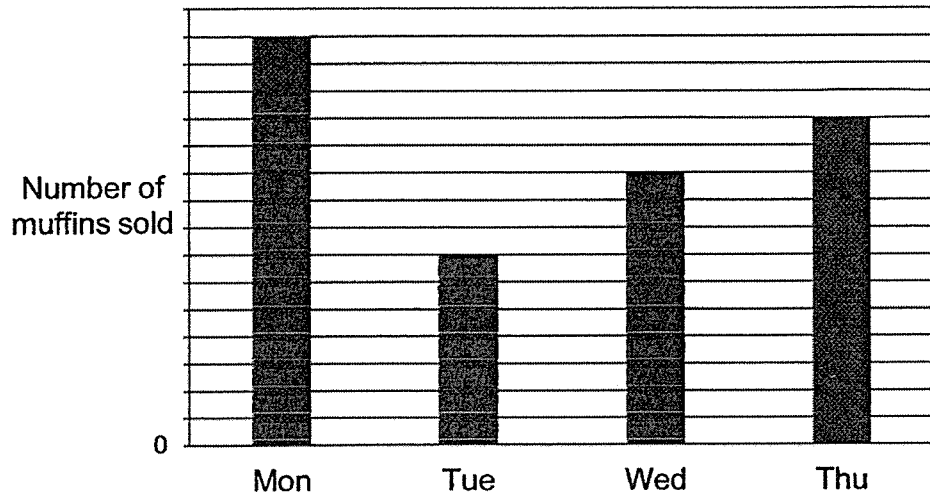
- 13 The figure shows two stacks of identical cups. There are 4 cups in the taller stack and 3 cups in the shorter stack. The height of the taller stack is 25 cm and the height of the shorter stack is 21 cm.



Omar wants to pack the cups as a single stack into a box 87 cm tall. What is the most number of cups he can pack into the box?

Ans: _____ [4]

- 14 A baker baked the same number of muffins each day for sale. The bar graph below shows the number of muffins sold by the baker from Monday to Thursday last week. The number of muffins sold is not shown on the scale.



- (a) On which day was the number of muffins left unsold the least?
- (b) The baker sold 34 more muffins on Thursday than on Wednesday. Each time a customer bought 8 or more muffins, a free gift was given. What was the greatest number of free gifts given to the customers from Monday to Thursday in all?

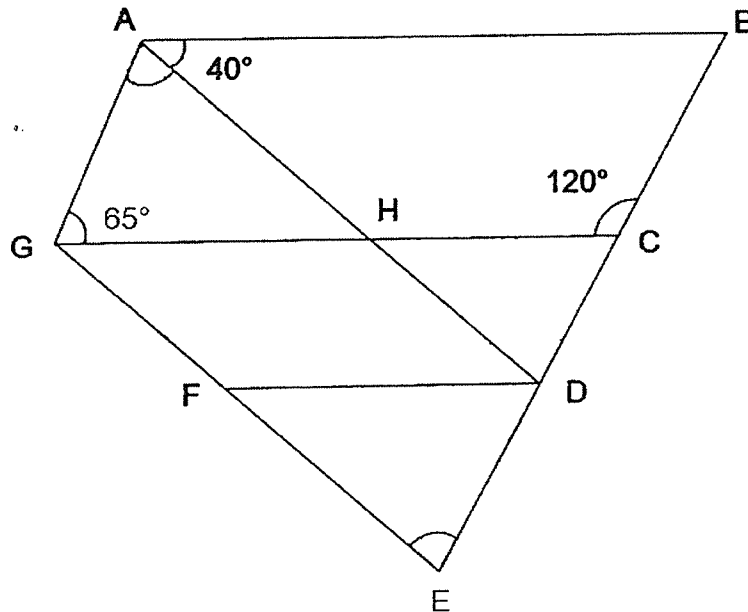
Ans: (a) _____ [1]

(b) _____ [3]

- 15 Mr Ng had some red pens, blue pens and green pens. The ratio of the number of red pens to the number of blue pens was 2 : 3 and the ratio of the number of blue pens to the number of green pens was 9 : 7. After he gave away some green pens and bought 26 blue pens, the total number of blue pens and green pens decreased by 25%. In the end, the total number of red pens, blue pens and green pens he had was 576. How many green pens did he give away?

Ans: _____ [4]

- 16 In the figure below, DFGH is a parallelogram and ABCH is a trapezium. AB is parallel to HC. BCDE, GHC, AHD and GFE are straight lines. $\angle BAH = 40^\circ$, $\angle AGH = 65^\circ$ and $\angle BCH = 120^\circ$.



- (a) Find $\angle GAH$.
 (b) Find $\angle DEF$.

Ans: (a) _____ [1]

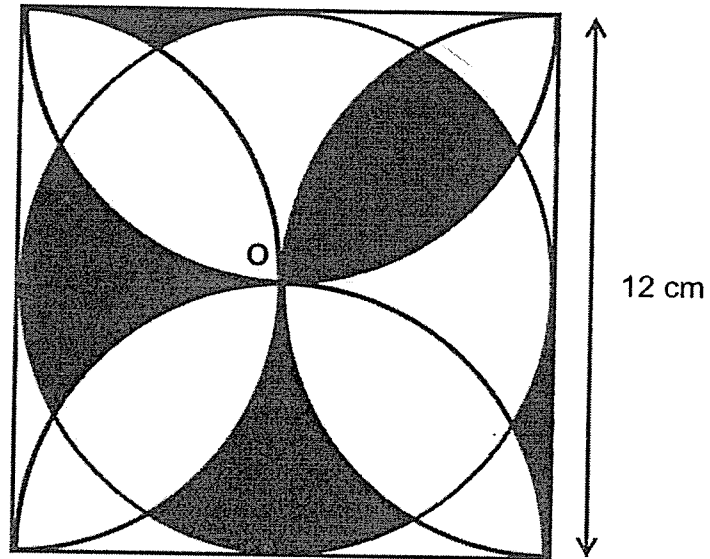
(b) _____ [2]

- (c) The figure above is not drawn to scale. Each of the statements below is either true, false or not possible to tell from the information given. For each statement, put a tick (\checkmark) to indicate your answer.

Statement	True	False	Not possible to tell
AGH is an isosceles triangle.			
AG is parallel to DE.			

[1]

- 17 The figure shows a circle and 4 identical semicircles drawn inside a square of side 12 cm. O is the centre of the circle.



- (a) Find the circumference of the circle.
(b) What is the total area of the shaded parts?

Take $\pi = 3.14$

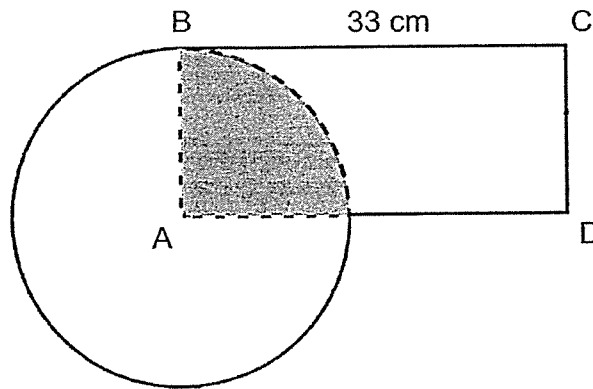
Ans: (a) _____ [1]

(b) _____ [4]

End of Paper

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13. In the figure below, rectangle ABCD overlaps with a circle with centre A. The area of the shaded part is $\frac{1}{3}$ the area of the rectangle. The total area of the unshaded parts of the figure is 770 cm^2 . Take $\pi = \frac{22}{7}$



- (a) Find the length of AB.
(b) What is the perimeter of the figure?

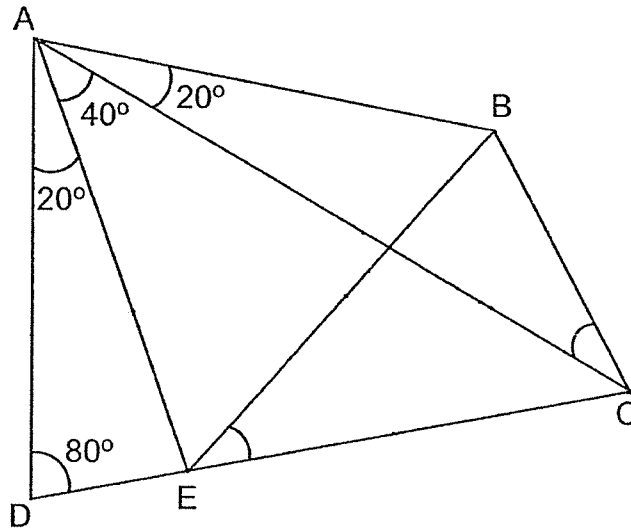
Ans: (a) _____ [3]

(b) _____ [2]



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14. In the figure, ABCD is made up of triangles ABC, ACE and AED. $AD = EB$.
CED is a straight line.



- (a) Find $\angle BEC$.
(b) Find $\angle ACB$.

Ans: (a) _____ [2]

(b) _____ [2]



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15. Dani collected \$235 in a donation drive on Saturday. The number of \$2, \$5 and \$10 notes were in the ratio of 6 : 3 : 2. Dani collected another \$68 on Sunday. As a result, the number of \$2 notes was increased by 30% and the number of \$5 notes was increased by 40%. The remaining notes were \$10.
- (a) How many \$10 notes were collected on Saturday?
- (b) What was the percentage increase in the number of \$10 notes collected from Saturday to Sunday?

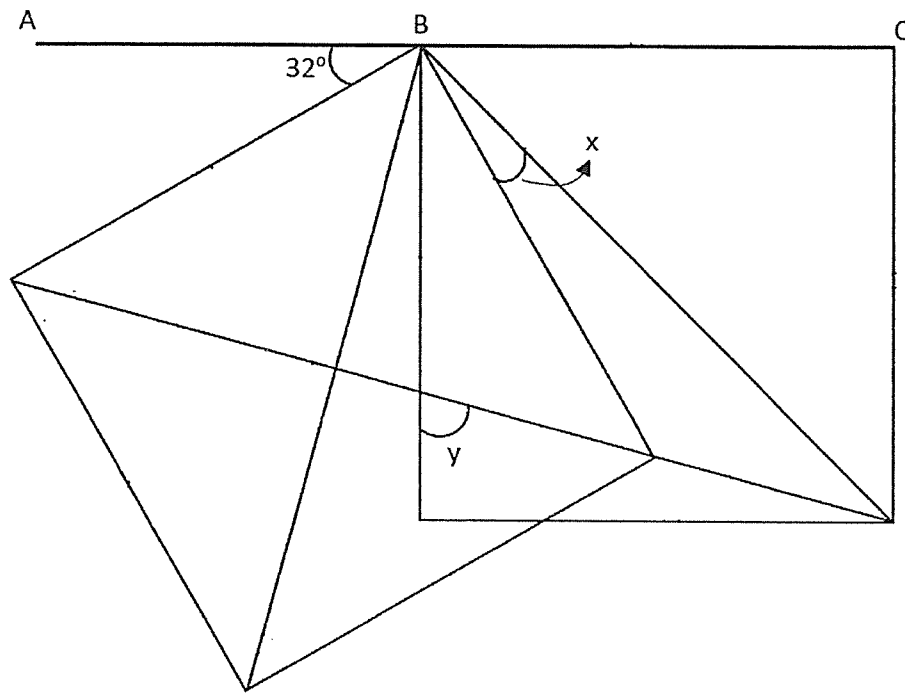
Ans: (a) _____ [2]

(b) _____ [3]

16. The figure is made up of two squares. ABC is a straight line.

(a) Find $\angle x$

(b) Find $\angle y$



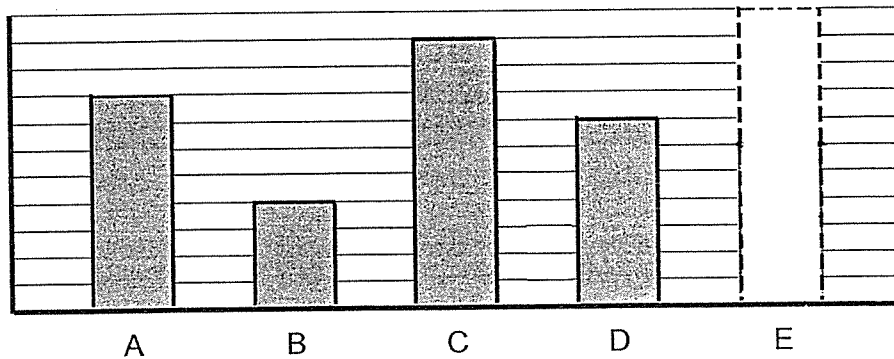
Ans: (a) _____ [2]

(b) _____ [2]



17. In a donation drive, five classes A, B, C, D and E baked some cupcakes for sale. The bar graph shows the number of cupcakes baked by classes A, B, C and D. The number of cupcakes baked is not shown on the scale. The bar for the number of cupcakes baked by class E has not been drawn.

Number of Cupcakes Baked By Each Class



- (a) The average number of cupcakes baked by the five classes is the same as the number of cupcakes baked by class D. How many cupcakes did class E bake? Draw your answer on the bar graph. [2]
- (b) The table shows the number of cupcakes sold by classes A, B, C and D.

Classes	Number of Cupcakes Sold	
	Small	Large
A	44	20
B	8	24
C	48	32
D	22	34
E		

Classes D and E sold 80% of their baked cupcakes.
How many cupcakes did class D bake?

- (c) Write down one possible set of values for the number of small and large cupcakes sold by class E.

Please show your working and answers on the next page.

Ans: (b) _____ [1]

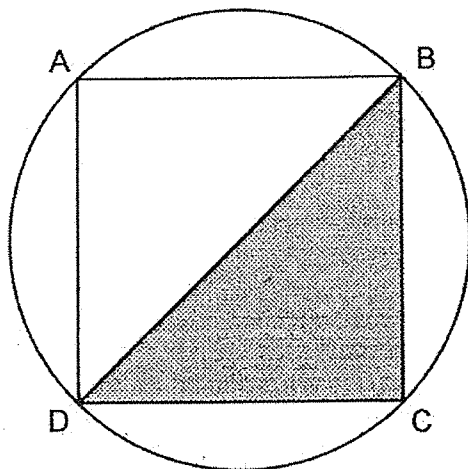
(c) Small: _____

Large: _____ [2]

-- End of Paper 2 --

Taonan 2021 Prelims Last 5 Questions

13. Study the following figure.



ABCD is a square and the area of the circle is 200.96 cm^2 . (Take $\pi = 3.14$)

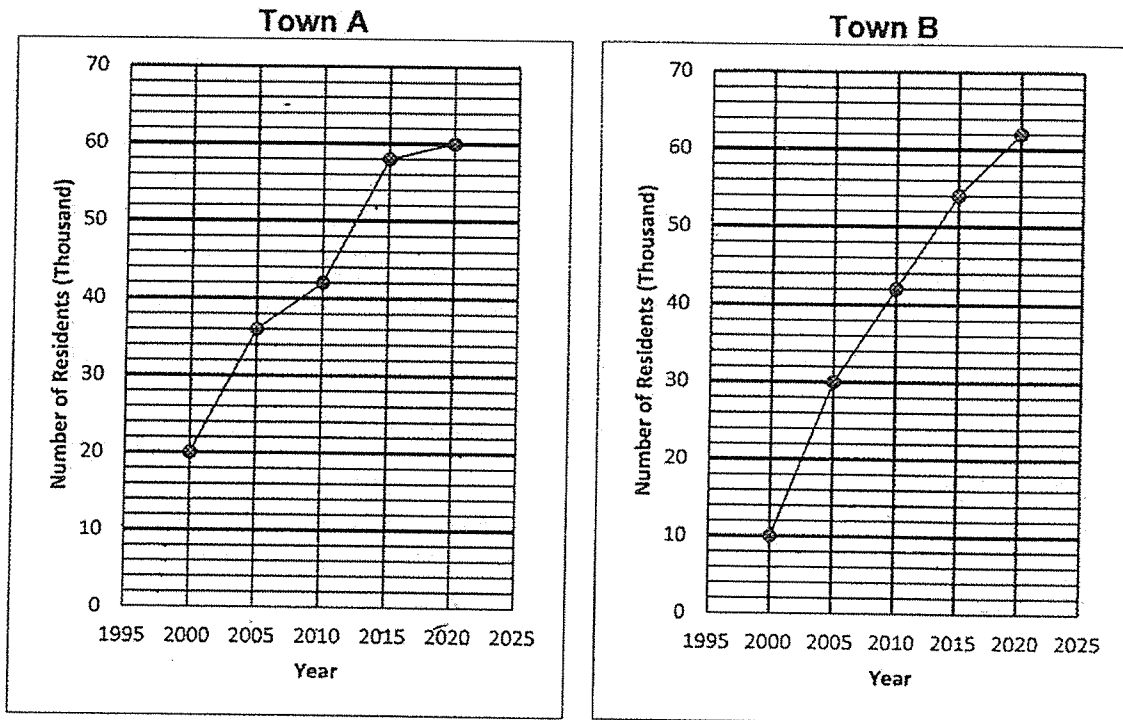
- (a) Find the radius of the circle.
- (b) Find the length of the arc AB.
- (c) Find the area of the shaded triangle BCD.

Ans: (a) _____ [2]

(b) _____ [1]

(c) _____ [1]

14. The line graph below shows the number of residents in Town A and Town B who are involved in a recycling project from Year 2000 to Year 2020.



- (a) In which year(s), were there more residents involved in the recycling project in Town B than in Town A?
- (b) For Year 2025, the number of residents in Town A who are to be involved in the recycling project are expected to increase by 25%. Find the number of residents in Town A who are expected to be involved in Year 2025.
- (c) What is the percentage increase in the number of residents in Town B who are involved in the recycling project from Year 2000 to Year 2020?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

15. The total age of workers in a restaurant is 256 years.
The average age of the oldest worker and youngest worker is 41 years.
The average age of the rest of the workers is 29 years.
Find the total number of workers in the restaurant.

Ans: _____ [3]

16. Aaron uses circles and triangles to form figures that follow a pattern. The first four figures are shown below.



Figure 1

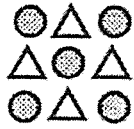


Figure 2

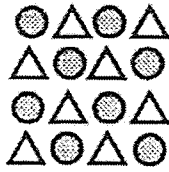


Figure 3

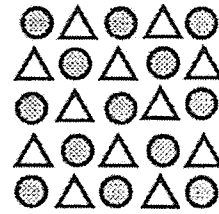


Figure 4

- (a) Complete the table for **Figure 5** and **Figure 20**. [2]

Figure Number	1	2	3	4	5	...	20
Number of triangles	2	4	8	12			
Number of circles	2	5	8	13			221
Total number of triangles and circles	4	9	16	25	36		

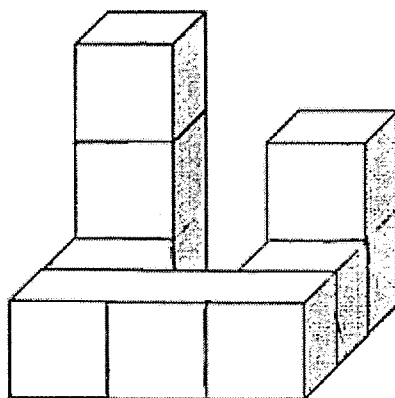
- (b) Find the Figure Number of the pattern that has a total of 729 triangles and circles.
- (c) Find the Figure Number of the pattern with 840 triangles.

Ans: (b) Figure _____ [1]

(c) Figure _____ [2]

17. The following solid figure was formed using ten 2-cm cubes.
The exterior of the solid figure (including the base of the solid) was painted.

- (a) Find the total painted surface area of the solid figure.
- (b) If the 2-cm cubes were taken apart, how many faces of the cubes were *not* painted?
- (c) More cubes were added to form a big cube.
What is the least number of 2-cm cubes added?



Ans: (a) _____ [2]

(b) _____ [1]

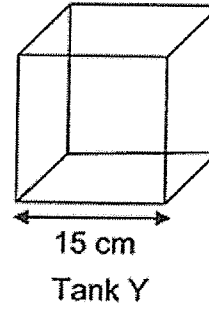
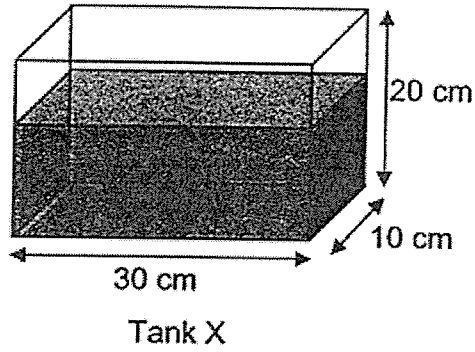
(c) _____ [2]

End of Paper 2

Raffles 2021 Prelims Last 5 Questions

13. Tank X is 30 cm long, 10 cm wide and 20 cm high. It is $\frac{5}{8}$ filled with water. Some water is poured into an empty cubical Tank Y until it is completely filled. The length of Tank Y is 15 cm.

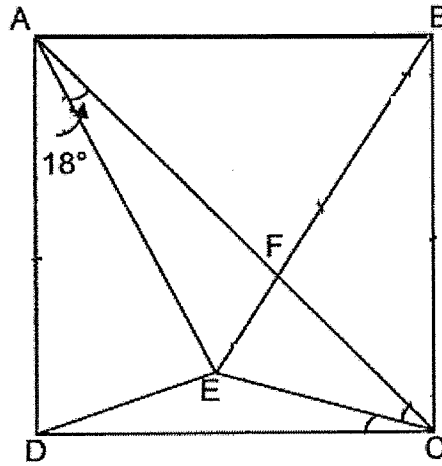
- (a) What is the volume of water in Tank X at first? Give your answer in cm^3 .
- (b) What is the volume of water left in Tank X? Give your answer in litres.



Ans: (a) _____ [2]

(b) _____ [2]

14. ABCD is a square. BFE and AFC are straight lines. $BC = BE$ and $\angle EAF = 18^\circ$.
- (a) Find $\angle ABE$.
- (b) Find $\angle ECD$.



Ans: (a) _____ [2]

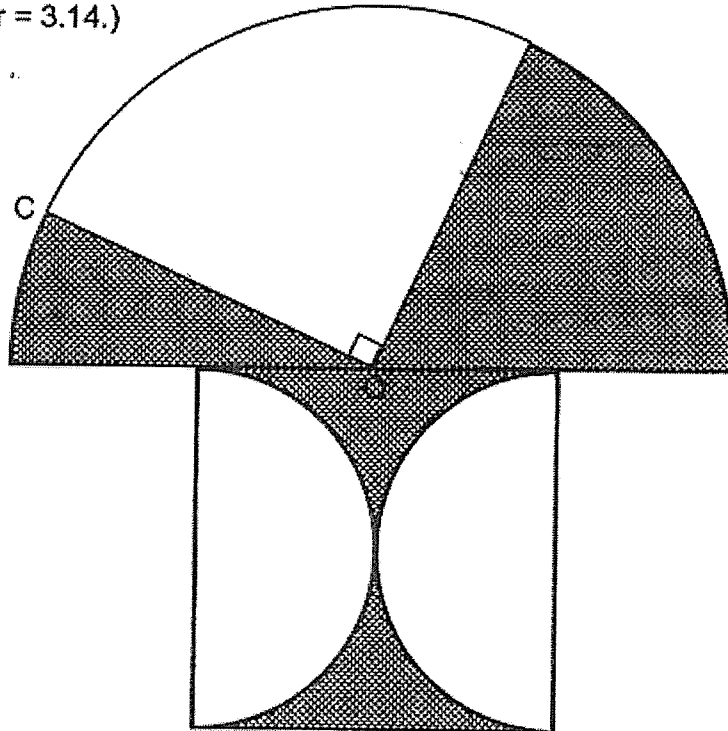
(b) _____ [2]

15. The figure consists of a square, a big semicircle, 2 small semicircles and a quarter circle. O is the centre of the big semicircle and quarter circle. The diameter of the big semicircle is 4 times the radius of the small semicircle. The length of OC is 8 cm.

(a) Find the diameter of the small semicircle.

(b) Find the perimeter of the shaded parts.

(Take $\pi = 3.14$.)



Ans: (a) _____ [1]

(b) _____ [3]

16. Mr Chew had 152 more mangoes than durians. He sold some mangoes and durians. The ratio of the number of mangoes sold to the number of durians sold is 3 : 1. The ratio of the number of durians sold to the number of durians left is 1 : 2. $\frac{2}{3}$ of the fruit left were mangoes.

(a) How many durians did he have left?

(b) How many mangoes did he have at first?

Ans: (a) _____ [3]

(b) _____ [2]

17. Tammy sold some shoes and backpacks and received \$16 107. Tammy received \$663 more from selling the backpacks than from selling the shoes. Each backpack cost \$69 less than each pair of shoes. The number of pairs of shoes sold was $\frac{3}{5}$ of the number of backpacks sold.

(a) How much money did she receive from selling the shoes?

(b) How many backpacks did she sell?

Ans: (a) _____ [1]

(b) _____ [4]

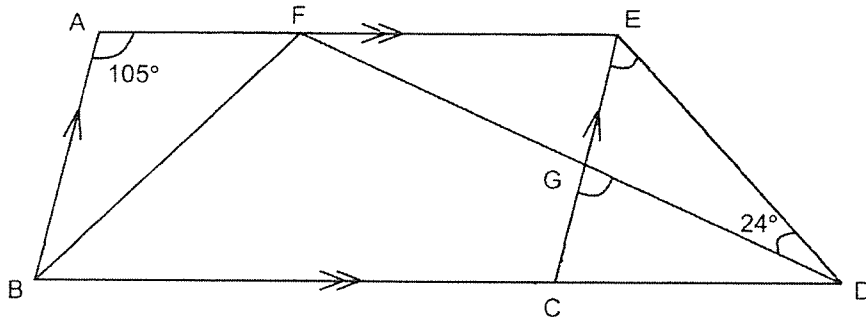
End of Paper
Please check your work carefully ☺

Red Swastika 2021 Prelims Last 5 Questions

- 13 The figure below is formed using straight lines with the following conditions:
 $AE \parallel BD$, $BA \parallel CE$, $AE = BC$, $ED = EF$, $\angle EDG = 24^\circ$ and $\angle BAF = 105^\circ$.

(a) Find $\angle CGD$.

(b) Find $\angle GED$.

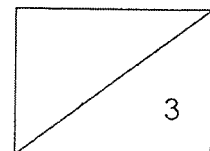


Ans: (a) _____ [1]

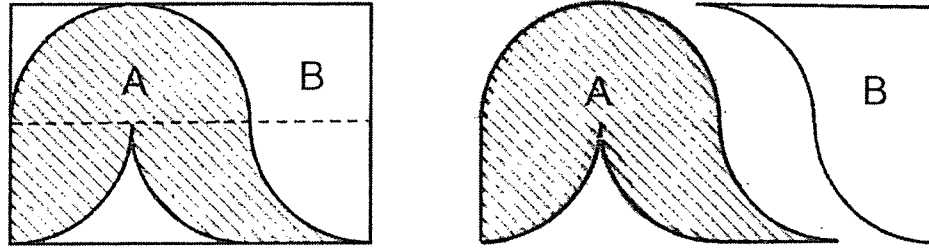
(b) _____ [1]

- (c) Based on the figure above, fill in the blanks below with **parallelogram**, **rhombus** or **trapezium** so that the statement about ABCE and BFED is correct.

ABCE is a _____ and BFED is a _____. [1]



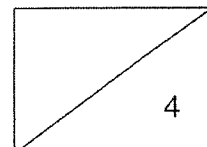
- 14 The rectangle below contains 5 identical quarter circles. The radius of each quarter circle is 10 cm. Shape A and Shape B were cut out as shown.



- (a) Using the calculator value of π , find the area of Shape A. Round off the answer to 2 decimal places.
- (b) Using $\pi = 3.14$, find the difference in the perimeter of Shape A and Shape B.

Ans: (a) _____ [2]

(b) _____ [2]

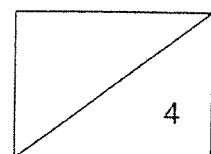


15 Siti spent 20% of her money on 1 bag and 2 T-shirts. The bag cost 3 times as much as each T-shirt. She spent 60% of the remaining money on a pair of shoes.

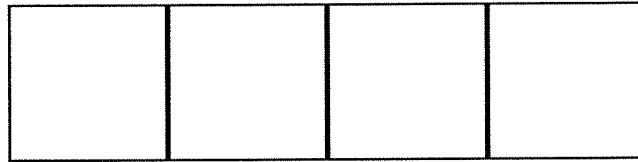
- (a) What was the ratio of the price of the bag to the price of 1 T-shirt to the price of the pair of shoes?
- (b) Lynn bought the same 4 items as Siti a few weeks later. The price of the shoes decreased by 25% and the price of the rest of items were not changed. Lynn paid \$36 less than Siti. How much did Lynn pay for all the 4 items?

Ans: (a) [2]

(b) [2]



- 16 William joined 4 identical square frames as shown below. All the 13 sides of the square frames were tied with balloons.

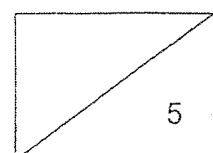


He tied the same number of big balloons on each side of the square frame. Between every 2 big balloons, he tied 5 small balloons.

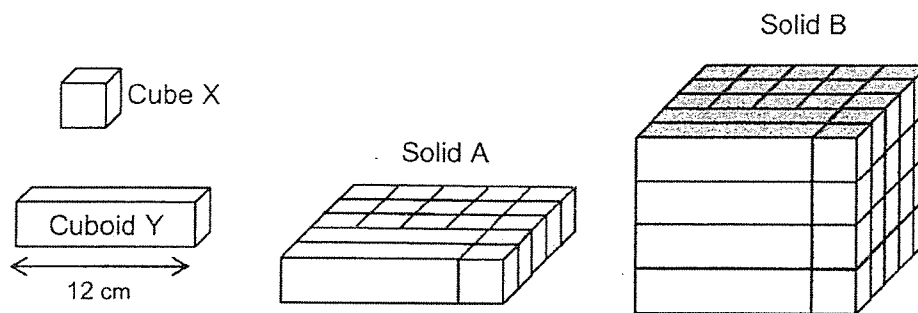
- (a) If William had 30 big balloons, what was the greatest number of big balloons he could tie on each side of the square frame?
- (b) How many big and small balloons would he need altogether if he tied 10 big balloons on each side of the square frame?

Ans: (a) _____ [1]

(b) _____ [4]



- 17 Tom built solid A by gluing together some identical cuboids Y and some identical cubes X as shown.



Tom built solid B by gluing 4 solids A together and then painted all the 6 faces of solid B.

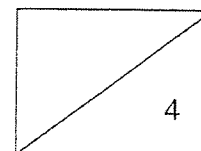
- Find the volume of solid A.
- How many cubes X have none of the faces painted in solid B?
- How many cubes X have only 2 of the faces painted in solid B?

Ans: (a) _____ [2]

(b) _____ [1]

(c) _____ [1]

END OF PAPER



Rosyth 2021 Prelims Last 5 Questions

13. Claire had a roll of wire that was used to make stars. She used 3.75 m of the wire to make 12 small stars and 15 big stars. There was some remaining wire left. She could not make a big star with the remaining wire as she would be short of 4 cm of wire. So she made a small star with the remaining wire instead and had 3 cm of wire left.



- (a) What was the difference in the length of wire used to make a big star and a small star?
- (b) What was the length of the roll of wire Claire had at first?

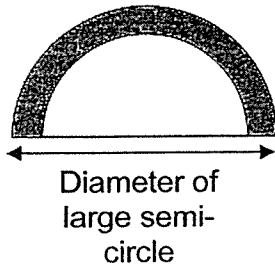
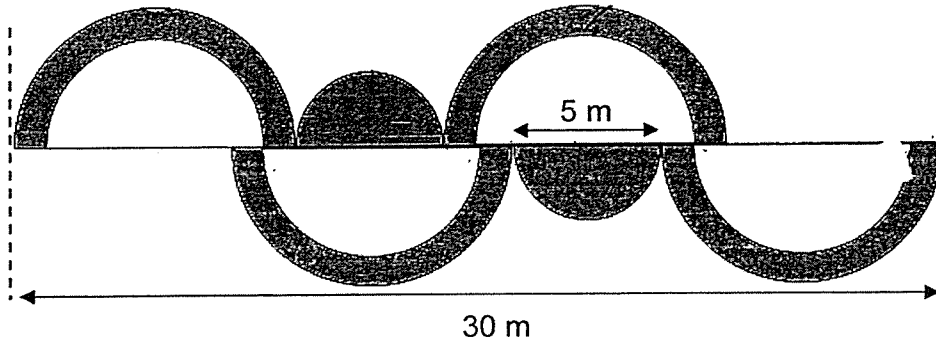
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Ans: (a) _____ [1]

(b) _____ [3]

14. The figure shown below is made up of identical semi-circles of different sizes, 2 small, 4 medium and 4 large. The length of the figure is 30 m. Each of the small semi-circle has a diameter of 5 m.

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- (a) Find the diameter of 1 large semi-circle.
- (b) Find the total area of all the shaded portions. (Take $\pi = 3.14$)
Express your answer to 2 decimal places.

You may continue your working on the next page



Continue your working here for question 14.

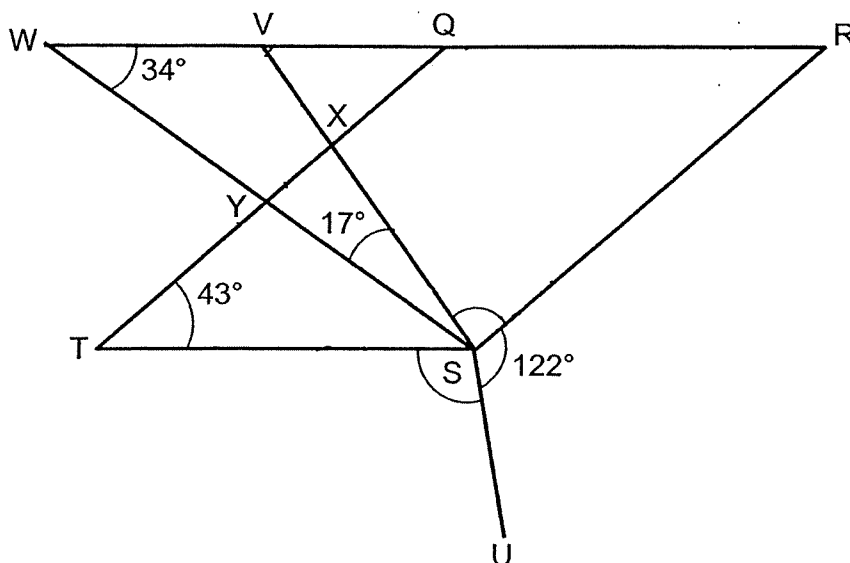
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Ans: (a) _____ [1]

(b) _____ [3]

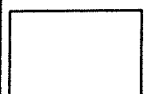
15. In the figure shown below, QRST is a parallelogram. WR, WS, SU and VS are all straight lines. $\angle SWV = 34^\circ$, $\angle WSV = 17^\circ$, $\angle QTS = 43^\circ$ and $\angle RSU$ is 122° .

- (a) Find $\angle TSU$.
 (b) Find $\angle RSX$.
 (c) Find $\angle VXY$.



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- Ans: (a) _____ [1]
 (b) _____ [2]
 (c) _____ [1]



16. Serene had some oranges in her shop. She sold $\frac{1}{6}$ of them in the afternoon and 280 of the oranges in the evening. She was left with $\frac{3}{5}$ of the oranges. She packed these remaining oranges into boxes.

Some of the boxes contained 8 oranges while the rest of the boxes contained 12 oranges.

- (a) How many oranges were packed into the boxes?
(b) She packed 20 more boxes with 8 oranges than boxes with 12 oranges. How many boxes were used to pack 8 oranges?

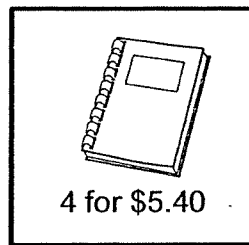
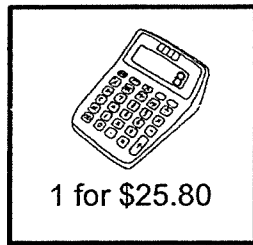
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in this space

Ans: (a) _____ [2]

(b) _____ [3]

17. Below shows the prices of some items at a bookshop.

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- (a) Kenny bought 2 calculators and 16 notebooks for \$60.30. There was a discount given on the calculators only. What was the percentage discount of the calculators?
- (b) Mr Koh bought an equal number of calculators and notebooks without any discount. He spent \$1467 more on the calculators than the notebooks. How many notebooks did he buy?

Ans: (a) _____ [2]

(b) _____ [3]



End of Paper