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சபரகமுவ மாகாணக் கல்வித் திணைக்களம்
Sabaragamuwa Provincial Department of Education

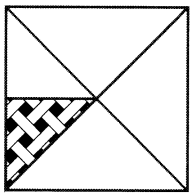
තුන්වන වාර පරීක්ෂණය - 2018	8 ශ්‍රේණිය
மூன்றாம் தவணைப்பரீட்சை - 2018	தரம் 8
Final Term Test - 2018	Grade 8

ගණිතය I, II கணிதம் I, II Mathematics I, II	පැය දෙකයි இரண்டு மணித்தியாலம் Two Hours

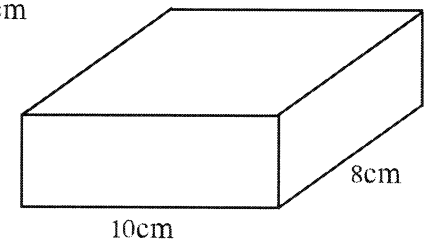
Part - I
Questions in Part - I carry two marks each.

01. 8, 11, 14, ..., ... Write the next two terms in the given number pattern.

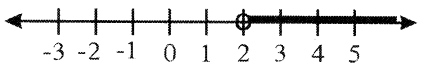
02. Write down a fraction for the shaded part from the whole figure.



03. The length and the breadth of the given cuboid are 10cm and 8cm respectively. If the volume of the cuboid is $400cm^3$, Find the height of it.



04.

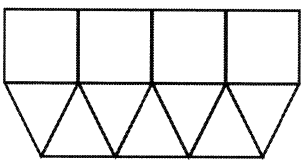


Write the inequality represented by the number line.

05. Five books are placed as one above one on a table. If the thickness of a book is 2.5cm, Find the total thickness of 5 books.

06. Find the actual distance of 5cm in diagram drawn to scale 1 : 50.

07. Name the given tessellation.



08. The range of a collection of data is 23. If the highest value is 67, Find the lowest value of the collection of data.

09. Find the value ; 24.6 ÷ 0.6

10. Nimal started from point A and he went 10m to the South. Then, went 5m to 45^0 to the East from the North and came to point B. Display above information in a diagram.

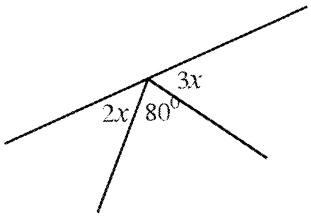
11. What axis does the $x = 2$ line which drawn on a cartesian plane, parallel to ?

12. Name the portion which is bounded by two radii and the part of the circumference.

13. Express the maximum amount of the liquid that can be included in a container with capacity of $120 cm^3$ in liters.

14. Represent the set of whole number solutions on a number line of $x \geq 1$ inequality.

15. The mean weight of 5 students is 35kg. Find the total weight of 5 students.

16. 

Find the x.

17. i. Write an expression for the perimeter of the given rectangle.

ii. Find the factors of that expression.

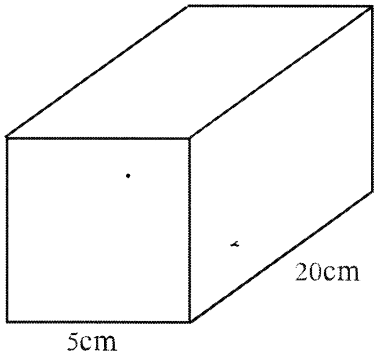
18. Could a triangle is construct with line segments of 5cm, 7cm and 3cm. Give the reasons.

19. 24, 26, 28, 22, 25 Find the median of the given collection.

20. Find the vertices of a combined solid with 6 equal pyramids pasted in to the all faces of a cube with the same dimensions as the bases of pyramids.

Part - II
Answer only five questions.

01.



● A figure of a fish tank is shown above.

i. Find the area of the base of it. (02 Marks)

ii. If the tank is filled with water up to 15cm, Find the total volume of water in the tank in cm^3. (02 Marks)

iii. Write down the volume of water in the fish tank in liters. (02 Marks)

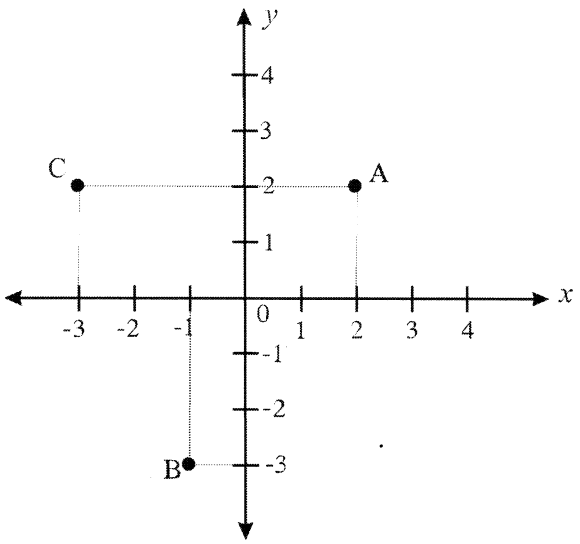
iv. Another 2*l* of water was added to the above tank. What is the new volume of Water in cm^3. (03 Marks)

v. Find the new height of the water level. (03 Marks)

02. (a) i. Simplify. $3(x + 5) - 2(x - 2)$ (04 Marks)

ii. $\frac{3x}{2} + 1 = 7$ Find the value of x. (02 Marks)

iii.



write down the coordinates of points A, B and C. (03 Marks)

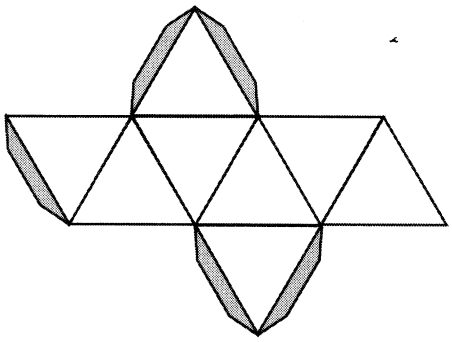
(b) The mean weight of 4 students is 30kg. When another is added, the mean weight was 31kg.

i. What is the weight of the newly added student. (02 Marks)

ii. If the weight of newly added student is 30kg, Show that mean of 30kg will not be changed. (02 Marks)

03. i. Name two Platonic solids. (02 Marks)

ii.



Name the solid which can be made using this net. (01 Marks)

iii. Write down the number of vertices and edges. (02 Marks)

iv. Show that this solid agrees with the Euler's relation. (04 Marks)

v. If the area of a face of the given solid is $12.5cm^2$, Find the surface area of it. (03 Marks)

04. $\{ \in, \notin, O, \emptyset \}$

(a) Fill in the blanks by using the symbols in the brackets.

i. Pentagon ..... { polygons }

ii. ♂ ..... { notes of music }

iii. If A = { Multiples of 12 between 0 and 10 } , A = ... (03 Marks)

iv. If B = {Digits of the number 1 000 000 } ,Write down the set B including with its elements. (03 Marks)

(b) Write down the sets with its elements.

i. P = { Prime numbers up to 10 }

ii. Q = { Letters of the word " COLOMBO " }

iii. R = { Vowels in the English alphabat } (06 Marks)

05. (a) Write the number of rotational symmetry of a parallelogram. (02 Marks)

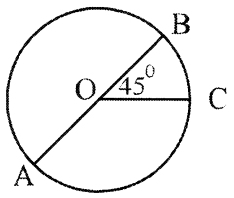
(b) Construct a equilateral triangle with the length of a side is 4cm. (03 Marks)

(c) i. Construct a circle with the radius is 5cm. (01 Marks)

ii. Draw the longest chord and measure the length of it. (02 Marks)

iii. Write the relationship between the radius and the longest chord. (01 Marks)

(d)



i. O is the center of the given circle. And find the length of the straight line AB.(02 Marks)

ii. Find the value of $A\hat{O}C$ (01 Marks)

06. (a) Simplify.

I. $\frac{1}{6} + \frac{2}{3}$ (01 Marks)

ii. $\frac{2}{3} \times \frac{1}{5}$ (01 Marks)

iii. $3\frac{3}{4} \times 1\frac{1}{5}$ (02 Marks)

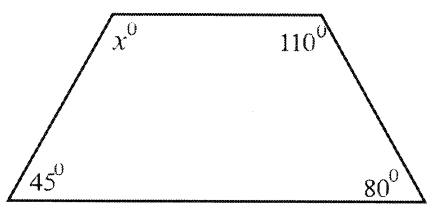
iv. $8 \div \frac{2}{5}$ (01 Marks)

v. The car drives $15\frac{1}{2}$ km from 1*l*. Find the distance that 6*l*. Find the distance that can drive from 6l. (03 Marks)

(b) Express 441 as a product of prime factors. Find the value of $\sqrt{441}$ by prime factors. (04 Marks)

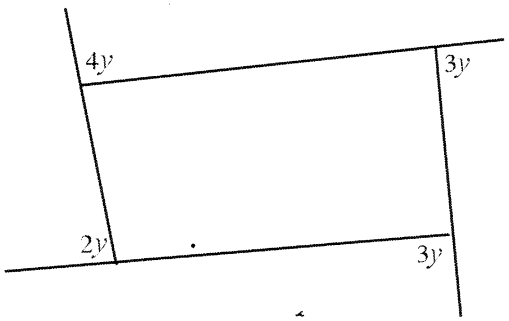
07. (a) Find the value of x in the given plane figure.

i.



(02 Marks)

ii. Find the value of y in the given figure and find the value of each angle.



(03 Marks)

(b) (i) Match the common term of given number patterns.

i. 1, 3, 5, 7, ...	n^2
ii. 3, 6, 9, 12, ...	$2n - 1$
iii. 1, 4, 9, 6, ...	$\frac{n(n+1)}{2}$
iv. 1, 3, 6, 10, ...	$3n$

(04 Marks)

(ii) Amal said that the addition of two successive terms of a triangular number pattern which started from 1 is a square number. Do you agree with this statement? Give the reason.

(03 Marks)

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