

සියලු ම හිමිකම් ඇවිරිණි  
முழுப் பதிப்புரிமையுடையது.  
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බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව  
மேல் மாகாணக் கல்வித் திணைக்களம்  
Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම  
ஆண்டு இறுதி மதிப்பீடு  
Year End Evaluation

- 2021

ශ්‍රේණිය  
தரம்  
Grade

8

විෂයය  
பாடம்  
Subject

Mathematics

පත්‍රය  
வினாத்தாள்  
Paper

I, II

පැය  
மணித்தியாலம்  
Hours

2

Name :

Index number :

## Part 1

- Answer all the questions on this paper itself.
- Each question carries 02 marks.

1. Write the next two terms of the given number pattern.

1, 3, 6, 10, ....., .....

2.  $x$  and  $42^\circ$  are a pair of complementary angles. Find the value of  $x$ .

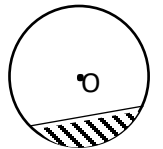
3. Find the value.

(i)  $(-2) \times (+3)$

(ii)  $(-8) \div (-2)$

4. If  $a = (-2)$ , find the value of  $a^3$

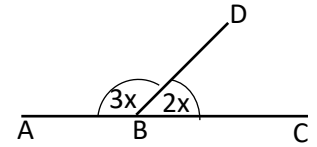
5. The centre of the circle is O. Write the name given to the shaded part of the circle.



6. Remove the brackets and simplify.

$$4(x-2) + 3x$$

7. AB and CD are straight lines. Find the value of x.



8. Find the value

$$\sqrt{484}$$

9. Write 200g as a percentage of 1kg.

10. If  $A = \{\text{Words of the letter "රතු චතුර"}\}$ , find  $n(A)$ .

11. Fill in the blanks using suitable numbers.

$$4.25\text{t} = \dots\dots\dots\text{t} \dots\dots\dots\text{kg}$$

12. Solve.

$$2x - 1 = 3$$

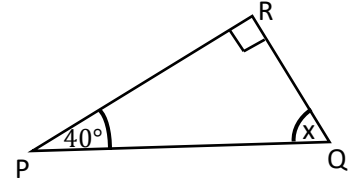
13. Write the given percentage as a ratio.

$$28\%$$

14. Write the given expression as a product of two factors.

$$a^2b + ab^2$$

15. PQR is a triangle. Find the value of x.



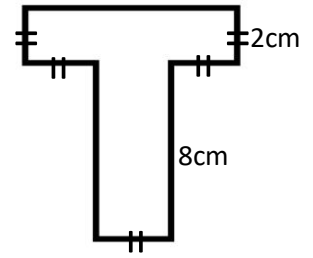
16. Simplify

$$\frac{5}{6} \times \frac{3}{4}$$

17. If  $273 \times 31 = 8463$ , find the value of  $0.273 \times 0.31$



18. Find the perimeter of the given figure.



19. Sri Lanka is situated in  $(+5\frac{1}{2})$  time zone. If Greenwich time is 05:30, find the time in Sri Lanka.

20. Find the volume of the cuboid if the length is 25cm, breadth 20cm and height 10cm of it.

### Part 11

- Answer the first question and another four questions only.
- The first question carries 16 marks and the other questions carry 11 marks each.

- 1) A cube and a regular tetrahedron are two platonic solids.
- Write the names of the other platonic solids.
  - Draw a shape of the face of one solid that you have mentioned above(a).
  - Euler's relationship is satisfied with the solid which has 30 edges and 12 vertices.
    - Write the Euler's relationship.
    - Find the number of faces it has.
    - Write the name of that solid.
  - Find the total surface area of a cube of side length 8cm.

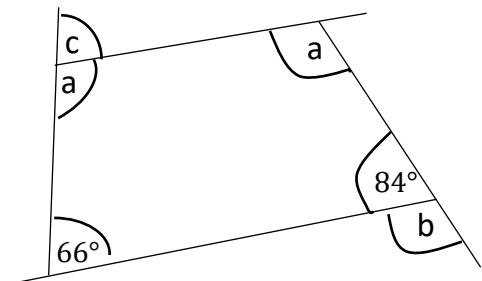
- 2) Find the value.

- $\frac{5}{9} \times 1\frac{1}{5}$
- $3\frac{2}{11} \div 2\frac{1}{2}$
- $87.6 \div 0.12$

- 3) a) Find the value of a, b and c, using the information given in the figure.

- b) A tessellation created using only one regular polygonal shape is known as a regular tessellation.

- Name two polygons that can be used to create regular tessellations.
- Draw a regular tessellation using one polygon that you have written above (i).



4) a) Write the order of rotational symmetry of the plane figures given below.

i. equilateral triangle

ii. square

b) find the value

$$(-4) - (-2) + (+3)$$

c) Solve.  $2(x+1)-1=5$

d) The locations of three places P, Q and R in the horizontal plane are given below.

- Q is situated 600m from P in the direction  $60^\circ$  East of North.
- R is situated 400m from Q in the direction  $40^\circ$  East of South.

Draw a sketch to show the locations of places P, Q and R with measurements based on the above information.

5) a) The masses of a group of children are given below in kilogrammes.

12, 15, 18, 10, 12, 17, 16, 14

Find

i. the mode

ii. the median of the above data.

b) Construct a triangle ABC, with side lengths  $AB = 6\text{cm}$ ,  $BC = 5\text{cm}$ ,  $AC = 8\text{cm}$

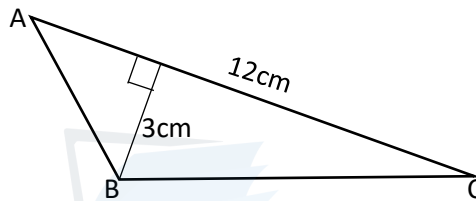
c) A box contains 5 cards numbered 1, 2, 3, 4 and 5. A card is drawn randomly from the box by a child. Find the probability of drawing a square number.

6) a) Represent the inequality  $-2 < x \leq 3$  on a number line.

b) A(1,1) B(5,2) C(7,1) D(7,-3) E(5,-4) F(1,-3)

- Draw a suitable Cartesian plane and mark the points given above.
- Join that points in the given order to get a closed figure.
- Write the equation of the axis of symmetry of the figure drawn above.

7) a) Find the area of the triangle ABC.



b) Find the surface area of a cuboid shaped wood of length, breadth and height equal to 12cm, 8cm, and 5cm respectively.

c) The table below shows the ratio of flour, sugar and butter used by A and B companies to produce the same sweetmeat.

Company	ratio	Flour: Sugar	Sugar : Butter
A		2 : 1	3 : 2
B		3 : 2	5 : 4

Which company produces the sweetest sweetmeat? Give reasons for your answer.

## 8 ශ්‍රේණිය - ගණිතය

## 1 කොටස

1. 15, 20	2	12. $X = 2$	2
		$2x = 4$	1
2. $48^\circ$	2		
$x + 42^\circ = 90^\circ$	1	13. $28 : 100$	1
		$7 : 25$	1
3. (i). (-6)	1	$7 : 25$ පමණක් වුවත් ලකුණු 2 දෙන්න.	2
(ii). (+4)	1		
		14. $ab(a + b)$	
4. (-8)	2	1 1	2
$(-2)^3$	1		
		15. $x = 50^\circ$	2
5. වෘත්ත ඛණ්ඩය / සුළු වෘත්ත ඛණ්ඩය	2	$x + 40^\circ + 90^\circ = 180^\circ$	1
6. $7x - 8$	2	16. $\frac{5}{8}$	2
$4x - 8 + 3x$	1	$\frac{15}{24}$	1
7. $x = 36^\circ$	2	17. 0.08463	2
$3x + 2x = 180^\circ$	1		
		18. 32cm	2
8. 22	2	$2 \times 5 + 8 \times 2 + 6$	1
$484 = 2 \times 2 \times 11 \times 11$	1		
		19. 16 : 00	2
9. 20%	2		
$\frac{200}{1000} \times 100\%$	1	20. $5000cm^3$	2
		$25 \times 20 \times 10$	1
10. $n(A) = 3$	2		
$A = \{ \text{ර, කු, ච} \}$	1		
11. 4 t 250kg			
1 බැගින්	2		

ලකුණු 40

2 කොටස

1. (a). අනෙක් ජලෝටෝ කැට නම් කිරීම. 3

(b). නිවැරදි හැඩ සඳහා එකකට 2 බැගින් 6

(c).  
 (i). මුහුණත් ගණන + ශීර්ෂ ගණන = දාර ගණන + 2 1

(ii). මු. ග. + 12 = 30 + 2 1  
 මු. ග. = 20 1

(iii). විංසතිතලය 1

(d).  $8 \times 8$  1  
 $6 \times 8 \times 8$  1  
 $= 384 \text{cm}^2$  1

[අවසාන පිළිතුරට එකකය නැත්තම් ලකුණු නැත.]

16

2. (a).  $\frac{5}{9} \times 1\frac{1}{5}$   
 $\frac{5}{9} \times \frac{6}{5}$   
 $\frac{2}{3}$

(b).  $3\frac{2}{11} \div 2\frac{1}{2}$   
 $\frac{35}{11} \div \frac{5}{2}$   
 $\frac{35}{11} \times \frac{2}{5}$   
 $\frac{14}{11}$   
 $1\frac{3}{11}$

(c).  $\frac{87.6}{0.12}$  2  
 $\frac{87.6 \times 100}{0.12 \times 100}$  1  
 $\frac{8760}{12}$  1  
 $730$   
 |  
 $\frac{876}{10} \div \frac{12}{100}$  2  
 $\frac{876}{10} \times \frac{100}{12}$  1  
 $730$  1

11

3. (a).  $x + 84^\circ = 180^\circ$  1  
 $x = 96^\circ$  1  
 $2a + 84^\circ + 66^\circ = 360^\circ$  1  
 $2a = 210^\circ$  1  
 $a = 105^\circ$  1  
 $y + 105^\circ = 180^\circ$  1  
 $y = 75^\circ$  1 (7)

(b). (i). සමපාද ත්‍රිකෝණය සමචතුරස්‍රය සවිධි ඡායාසූත්‍රය 3

(ii). නිවැරදි සවිධි ටෙසලාකරණයක් සඳහා 1

11

4. (a). (i). 3 1  
 (ii). 4 1 (2)

(b).  $(-4) + (+2) + (+3)$  1  
 $(+1)$  1 (2)

(c).  $2(x + 1) - 1 = 5$   
 $2(x + 1) = 6$  1  
 $x + 1 = 3$  1  
 $x = 2$  1 (3)

(d). නිවැරදි දළ රූපයට (4)

11

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5. (a). (i). 12 1

3 : 2  
6 : 3 : 2 1

(ii).  $\frac{12+15+18+10+12+17+16+14}{8}$  2

$\frac{114}{8}$  1

14.25 1

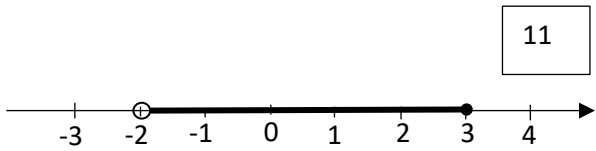
B  
පීට් : සීනි : බටර්  
3 : 2  
5 : 4

(5)

(b). නිවැරදි ත්‍රිකෝණ නිර්මාණයට (4) 15 : 10 : 8 1

(c).  $\frac{2}{5}$  (හරයට හා ලෙසට ලකුණු 1 බැගින්) (2) A හි අඩංගු සීනි කොටස =  $\frac{3}{11}$

B හි අඩංගු සීනි කොටස =  $\frac{10}{33}$  (දෙකටම) 1



6. (a).  $\frac{3}{11} = \frac{9}{33}$  1

$\frac{9}{33} < \frac{10}{33}$  නිසා B හි පැණි රස වැඩිය 1

සංඛ්‍යා රේඛාවට 1

-2 හා 3 නිවැරදිව දැක්වීම 1

-2 හි 3 හි අතර අඳුරු කිරීම. 1

(b). (i). නිවැරදි කාට්සිය තලය 1

නිවැරදි ලක්ෂ්‍ය 6 5

(ii). රූපයට 1

(iii). නිවැරදි සමීකරණය 1

11

7. (a).  $\frac{1}{2} \times 12 \times 3$  1

$18cm^2$  (ඒකක අවශ්‍යවේ.) 1

(b).  $2 \times 12 \times 8 + 2 \times 8 \times 5 + 2 \times 12 \times 5$  3

$192 + 80 + 120$

$392cm^2$  (ඒකක අවශ්‍යවේ) 1

(c). A  
පීට් : සීනි : බටර්  
2 : 1

11

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