බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
மேல் மாகாணக் கல்வித் திணைக்களம்
Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම
ஆண்டு இறுதி மதிப்பீடு - 2021
Year End Evaluation

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 42^0 are a pair of complementary angles. Find the value of x.

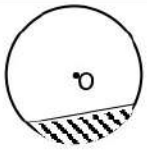
3. Find the value.

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

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

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

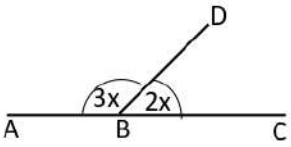
5. The centre of the circle is O. Write the name given to the shaded part of the circle.



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= {Words of the letter "රතු වතුර" }, find n(A).

11. Fill in the blanks using suitable numbers.

4.25t = …….t ……..kg

12. Solve.

2x - 1 = 3

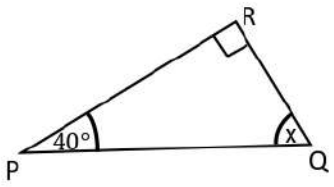
13. Write the given percentage as a ratio.

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.

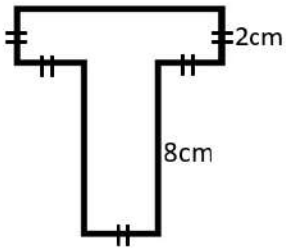


16. . Simplify

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

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

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.

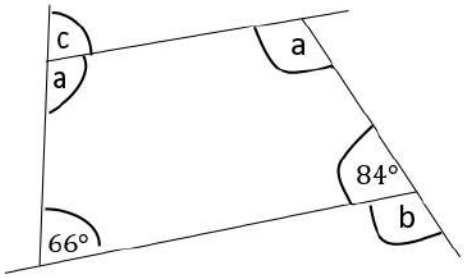
Part 11

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

2) Find the value.
   a) $\frac{5}{9} \times 1\frac{1}{5}$
   b) $3\frac{2}{11} \div 2\frac{1}{2}$
   c) $87.6 \div 0.12$

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.
   i. Name two polygons that can be used to create regular tessellations.
   ii. 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 60^0 East of North.
- R is situated 400m from Q in the direction 400 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 = 6cm, BC = 5cm, AC = 8cm

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.

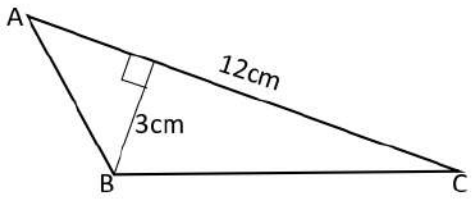
b) A(1,1) B(5,2) C(7,1) D(7,-3) E(5,-4) F(1,-3)

i. Draw a suitable Cartesian plane and mark the points given above.

ii. Join that points in the given order to get a closed figure.

iii. 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.

ratio / Company	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

2. 48° — 2
   $x + 42° = 90°$ — 1

3. (i). (-6) — 1
   (ii). (+4) — 1

4. (-8) — 2
   $(-2)^3$ — 1

5. වෘත්ත බණ්ඩය /සුළු වෘත්ත බණ්ඩය — 2

6. 7x – 8 — 2
   4x – 8 + 3x — 1

7. $x = 36°$ — 2
   $3x + 2x = 180°$ — 1

8. 22 — 2
   $484 = 2 \times 2 \times 11 \times 11$ — 1

9. 20% — 2
   $\frac{200}{1000} \times 100\%$ — 1

10. n (A) = 3 — 2
    A = { ර, තු, ව } — 1

11. 4 t 250kg
    1 බැගින් — 2

12. X = 2 — 2
    2x=4 — 1

13. 28 : 100 — 1
    7 : 25 — 1 — 2
    7 : 25 පමණක් වුවත් ලකුණු 2 දෙන්න.

14. ab (a + b)
    1 1 — 2

15. $x = 50°$ — 2
    $x + 40° + 90° = 180°$ — 1

16. $\frac{5}{8}$ — 2
    $\frac{15}{24}$ — 1

17. 0.08463 — 2

18. 32cm — 2
    $2 \times 5 + 8 \times 2 + 6$ — 1

19. 16 : 00 — 2

20. $5000cm^3$ — 2
    $25 \times 20 \times 10$ — 1

ලකුණු 40

2 කොටස

1. (a). අනෙක් ප්ලේටෝ 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). 8×8 1

6×8×8 1

$= 384 cm^2$ 1

[අවසාන පිළිතුරට ඒකකය නැත්නම් ලකුණු නැත.]

16

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

$\frac{5}{9} \times \frac{6}{5}$ 1

$\frac{2}{3}$ 2 (3)

(b). $3\frac{2}{11} \div 2\frac{1}{2}$

$\frac{35}{11} \div \frac{5}{2}$ 1

$\frac{35}{11} \times \frac{2}{5}$ 1

$\frac{14}{11}$ 1

$1\frac{3}{11}$ 1

(c). $\frac{87.6}{0.12}$

$\frac{87.6 \times 100}{0.12 \times 100}$ $\frac{876}{10} \div \frac{12}{100}$ 2

$\frac{8760}{12}$ $\frac{876}{10} \times \frac{100}{12}$ 1

730 730 1

11

3. (a). $x + 84° = 180°$ 1

$x = 96°$ 1

$2a + 84° + 66° = 360°$ 1

$2a = 210°$ 1

$a = 105°$ 1

$y + 105° = 180°$ 1

$y = 75°$ 1 (7)

(b). (i). සමපාද ත්‍රිකෝණය

සමචතුරස්‍රය

සවිධි ෂඩාස්‍රය 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

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

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

$\frac{114}{8}$ 1

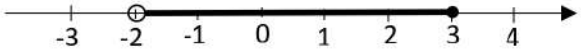
14.25 1

(5)

(b). නිවැරදි ත්‍රිකෝණ නිර්මාණයට (4)

(c). $\frac{2}{5}$ (හරයට හා ලවයට ලකුණු 1 බැගින්) (2)

11



6. (a).

සංඛ්‍යා රේඛාවට 1

-2 හා 3 නිවැරදිව දැක්වීම 1

-2 ත් 3 ත් අතර අඳුරු කිරීම. 1

(b). (i). නිවැරදි කාටිසීය 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

පිටි : සීනි : බටර්

2 : 1

3 : 2

6 : 3 : 2 1

B

පිටි : සීනි : බටර්

3 : 2

5 : 4

15 : 10 : 8 1

A හි අඩංගු සීනි කොටස = $\frac{3}{11}$

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

$\frac{3}{11} = \frac{9}{33}$ 1

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

11