



Minuwangoda Education Zone

Second Term Evaluation - 2023

Grade - 08

Mathematics I/II

Name:

Time: 2 hours

Part I

- Answer all questions
- Each questions carries 02 marks

01) $\frac{18}{5}$ Write as a mixed number

02) Write the order of rotational symmetry of a square

03) Write the name of the triangle which two sides are equal.

04) What is the reciprocal of $\frac{8}{5}$

05) Find the square root of 324 using prime factors

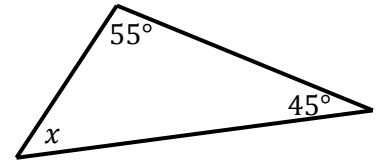
06) $3t$ $750kg$ write in kg

07) Fill in the blanks

$$27a^3 = 3^{\square} \times a^3 = (3a)^{\square}$$

08) Name a plane figure which the order of rotational symmetry is 2 and has not bilateral symmetry.

09) Find the value of x



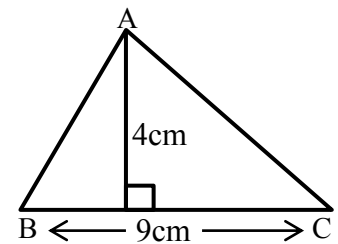
10) A vehicle travels $\frac{3}{4} km$ in a minutes. Find the distance it simplest form distance it travels in 12 minutes.

11) Express in simplest form 250: 750

12) Find the value $16.8 \div 0.07$

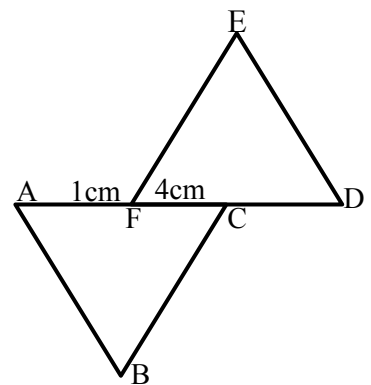
13) Solve the equation $2x + 3 = 0$

14) Find the area of the triangle ABC



15) Bangkok is in (+7) time zone and Auckland in New Zealand is in (+12) time zone. When the time in Bangkok is 13:00, Find the time in Auckland

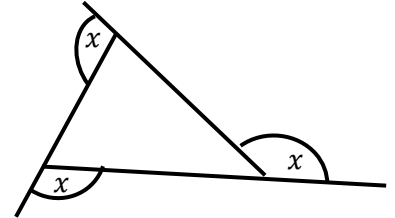
16) Diagram given below consists of two equilateral triangles with side length 5cm. Find the perimeter of it.



17) Find the value $\sqrt{400}$

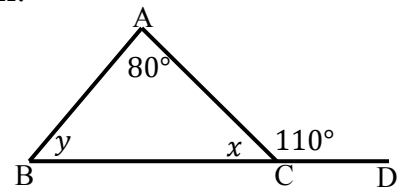
18) A family needs $1\frac{1}{2}$ bread per day. Find the number of bread needed for 7 days.

19) Find the value of x



20) When $273 \times 31 = 8463$, Find the value of 27.3×3.1

21) Find the value of x and y according to the given diagram.



22) A solid has 20 faces and 12 vertices. Write the number of edges it has.

23) Find the HCF of $2x, 8x, 14xy$

24) Find the value $(-4) \times (+6)$

25) $5^2 \times 8^2$ Write as power of a product

Part II

- **Answer only 5 questions including the first question.**
- **First question carries 16 marks and the other questions carries 11 marks each.**

01)

- (a) Recall the project that you have done in “Time” lesson with the guidance to your teacher.
- Name a resource that your group required to describe time zones according to the rotation of the earth.
 - Write two means of gathering informations in your project to describe the time difference in difference countries at the same moment.

- (b) Below is part of a calculation made by a student investigating the time zones. Fill in the blanks.

The time taken by the earth to make one complete rotation (360°) around its axis = day

That time in hours = hours

Time in minutes = $24 \times$ minutes

Time taken to rotate 360° = minutes

Time taken to rotate 1° = $\frac{\text{..... minutes}}{360^\circ}$

= minutes

Time taken to rotate 15° of longitude = \times 15 minutes

= 1 hour

- (c) Now, let us find the time of city A at 06:00 Greenwich time in terms of its longitude by considering that city A is located in a country at 75° East longitude

The time difference for 15° of longitude = 1 hour

\therefore the time difference for 75° of longitude = $\frac{1}{15} \times$ hours

= hours

The local time in city A = 06:00 +

=

- (d) Find the time in Sri Lanka when Greenwich time is 2.30p.m. on Monday. (The time zone to which Sri Lanka belongs + $5\frac{1}{2}$)

02)

- i. $A = \{\text{Letters of the word 'MAHARAGAMA'}\}$
 - a) Write the elements of set A
 - b) Find $n(A)$
 - c) $R \in A$ Is this statement true or false?
- ii. Write an example for a null set
- iii. $B = \{\text{Prime numbers less than 20}\}$

Write the elements of set B

Find $n(B)$
- iv. Write a common property of set P when $n(p)$

03) Simplify

- i. $\frac{2}{13} \times 6$
- ii. $\frac{5}{12} \times \frac{4}{7}$
- iii. $10\frac{2}{3} \times 2\frac{1}{4}$
- iv. $\frac{5}{6} \div 4$
- v. 1.26×0.7
- vi. How many pieces of 1.5m long ribbon can be cut from 15m long ribbon?

04)

- (a)
 - i. A certain amount of money divided between A, B and C in the ratio of 2:3:5. Write each person's amount as a fraction of the total amount.
 - ii. If the amount of money divided is Rs.5000. Calculate the amount received by B.

(b)

Name	Amount invested	Date of Invested	Time	Amount \times Time invests
Kamal	24 000	January 01	24000×12
Sunil	30 000	April 01	9 months

The table above shows how 2 people invested in the joint business.

- i. Fill the blanks in the table.
- ii. Find the ratio in which the profit should be divided between Kamal and Sunil after one year

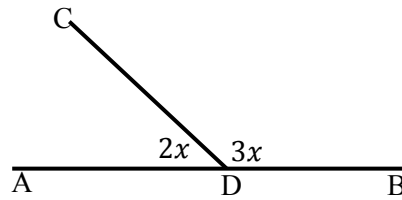
05)

- i. When add 7 to the number x the answer is 18. Construct a simple equation and find the value of x by solving it.
- ii. Remove the bracket $5(24 - 3b)$

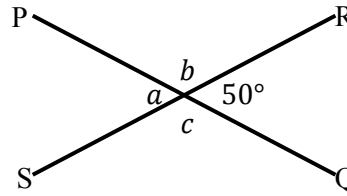
06)

- (a) Select the correct answer.
 - i. 245° (Obtuse angle/ reflex angle)
 - ii. Sum of a pair of complimentary angles ($90^\circ / 180^\circ$)
 - iii. Sum of a pair of supplementary angles ($90^\circ / 180^\circ$)

- (b)
i. Find the value of x



- ii. Find the value of a, b, c



07)

a) Remove brackets

i. $4(x - y + 7)$

ii. $-3(2x - 3y + 1)$

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

c)

i. Find the value $(-5)^3$

ii. When $x = 4, y = 3, z = 2$, Find the value of $(x + 2y + 5z)$