



De Mazenod College – Kandana.
Mathematics
Grade 7

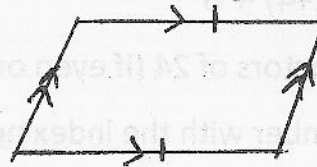


Name: -

Part - I

- Answer all the questions.

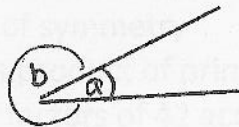
01. How many axis of symmetry are there in the given figure.



02. Write 81 in index notation with 3 as base

03. When $a = 3$, find the value of $3^2 a^2$

04. Name a and b angles according to their magnitudes



05. Write the decade and century 2025 AD belongs to

06. Select the correct sign from brackets and fill in the blanks. $(>, <=) 4^3 \dots 3^4$

07. Find the HCF of 24, 36, 60.

08. Saman says that 1700 AD is a leap year. Do you agree? Give reasons

09. The length of a side of a square is 12cm. Find the length of a side of an equilateral triangle

Which has the same perimeter as the square

10. Name the angle which has the sum of two right angles.

11. Simplify $\frac{5}{12} + \frac{1}{4}$

12. Add Months Days

7	15
<u>+ 3</u>	<u>18</u>

13. Select the numbers which are divisible by four without a remainder.

- a) 235 b) 356 c) 1249 d) 3460

14. Write 36 as a product of prime factors

15. $P = \{ \text{Prime numbers less than 10} \}$ present set P by a venn diagram

16. If 32 6 is divisible by 4 and 6 write a suitable number in the line

17. Simplify $5+3(2+4) \div 6$

18. Write all the factors of 24 (If even one factor is missing no marks will be given)

19. Match the number with the index notation.

Number	index notation
8	3^2
27	2^3
16	3^3
9	4^2

20. Write $5 \times 5 \times P \times P \times 5 \times P$ in index notation

Part II

• Answer question 1 and four more questions

01. a) i) Define what digital root of a number is (2m)
ii) Write two needs for a number to be divisible by 6 (2m)
iii) if 52 is divisible by 6, write a number which is suitable to fill the line (1m)
- b) i) Find the digital root of 3208 (2m)
ii) Write all the factors of 18 (if even one) factor is missing no marks will be given (2m)
iii) Write 100 as a product of prime factors (2m)
- c) i) Find the HCF of 18,27,36, by writing each number as a product of its prime factors (2m)
ii) There are red, blue and yellow LED bulbs in a circuit. They light after every 20,30,40 seconds. In order. If the three bulbs lighted at the same time for the first time, when will they light together again. (after how many seconds) (3m)
02. a) i) What is a 'set' ?
ii) $P = \{ \text{Prime numbers between 1 and 20} \}$ Write the elements of set P by writing in curly brackets.
iii) $A = \{1,4,9,16\}$ Write set A in terms of common properties of its elements.
b) i) Who introduced the method of presenting a set by a Venn diagram?

- ii) Present the elements of set B in a Venn diagram
- iii) $Y = \{\text{letters of the word Colombo}\}$ Write all the elements of the above set in curly brackets.

03..

- i) Write the base and index of 7^3
- ii) Write $3 \times 3 \times 5 \times 5 \times 5$ in index notation
- iii) Find the value of $2^2 \times 5^2$
- iv) Write 72 as a product of prime numbers
- v) Write $7 \times 7 \times P \times P \times b \times b$ in index notation
- vi) When $x=2$, $y=3$ find the value of $5x^2 y^3$

04. a) i) What is a bilaterally symmetric plane figure?
- ii) Write a special feature of a bilaterally symmetric plane figure
 - iii) Draw and name plane figures with the given axis of symmetry
 - (a) One axis of symmetry
 - (b) Two axis of symmetry
 - (c) Three axis of symmetry
 - (d) Four axis of symmetry
- b) i) Write 42 as a product of prime factors
- ii) Write all the factors of 42 according to the above prime factors.

05. a) i) Define what unit fractions are.
- ii) Select the proper fractions from the given fractions

$$\frac{5}{3}, \quad \frac{4}{6}, \quad \frac{15}{8}, \quad \frac{1}{5}, \quad \frac{4}{2}$$

- iii) Match the given equivalent fractions

1. $\frac{2}{3}$ $\frac{3}{12}$

2. $\frac{8}{12}$ $\frac{1}{3}$

3. $\frac{1}{4}$ $\frac{2}{3}$

4. $\frac{7}{21}$ $\frac{6}{9}$

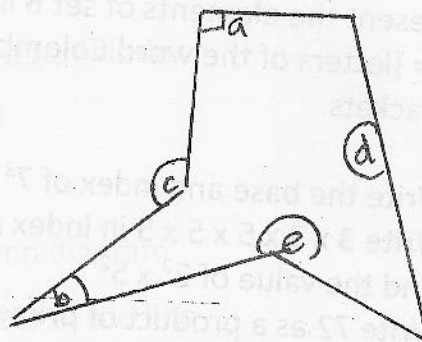
b) Simplify

i) $\frac{5}{8} + \frac{3}{24}$

ii) $\frac{3}{7} - \frac{5}{21}$

06. a) Name the angles marked by letters

- a) -
- b) -
- c) -
- d) -
- e) -



b) i) Solve $5 + (10 - 2) \times 6 \div 4$

ii) For an alms giving 48 buns and 24 bananas were brought. If these times were to be equally distributed among the people, how many people should be there.