FORMATIVE ASSESSMENT – THIRD MID TERM

MATHEMATICS

Max. Marks: 50

Std - VII

Time: 1½ Hrs

Name of the School:	**Name of the Student:**
_____	_____
Place:	**Roll No.:**
_____	_____

I. Choose the correct answer: 5 x 1 = 5

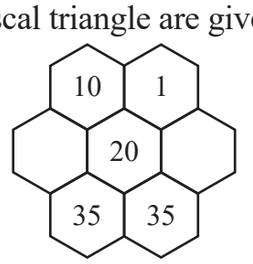
1. Row 0 of the pascal triangle is _____.
   a) 0 b) 1 c) 10 d) 101
2. Every element in the pascal triangle is obtained by finding the _____ of the two numbers above it.
   a) Sum b) Difference c) Product d) Quotient
3. Find the next sequence. AE, BF, CG, DH, _____, _____.
   a) EE b) EH c) EI d) EJ
4. 55, 75, 95, 115, _____, _____.
   a) 135, 145 b) 125, 135 c) 135, 155 d) 145, 155
5. $2^3 + 2^2$ is equal to _____.
   a) 20 b) 12 c) 32 d) 10

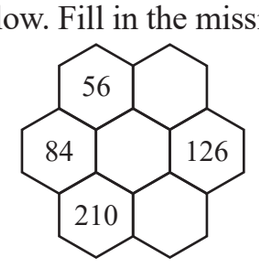
II. Fill in the blanks: 5 x 1 = 5

6. Equilateral triangle has _____lines of symmetry.
7. A _____ is a sequence or series which repeats based on a particular rule.
8. A _____ shows you the shortest distance from one place to another.
9. $5x + 5 = 20$,then x is equal to _____.
10. $21 \times 8 \times 84$ is equal to _____.

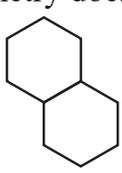
III. Do as directed (Any 10) 10 x 2 = 20

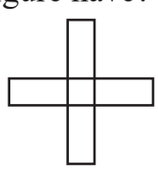
11. Portions of the pascal triangle are given below. Fill in the missing numbers in each case.





12. Define polyomino and write its types.
13. Draw a pascal triangle upto row 6.
14. How many lines of symmetry does each figure have?



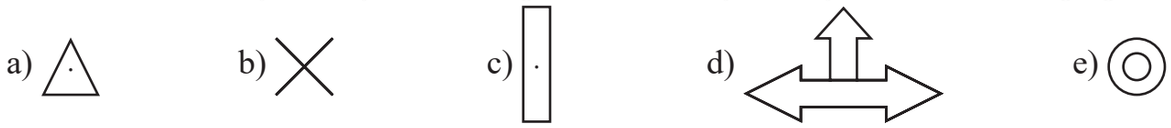


15. Define rotational symmetry and illustrate it with a rectangle shape.
16. Find the missing numbers in the series.
    a) 1, 4, 9, 16, _____, _____, _____.
    b) 31, 33, 35, 37, 39, 41, _____, _____, _____.

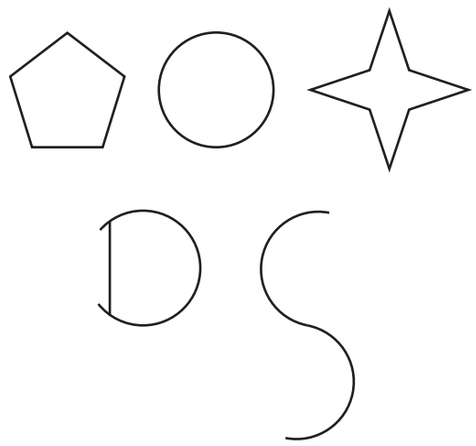
17. Express 60 as the sum of triangular numbers.
18. Explain the hockey stick pattern in the pascal triangle with a neat diagram.
19. Explain about the Fibonacci sequence.
20. Find the value of the variable.
    (i) $2x + 8 = 110$ (ii) $4x + 15 = 27$
21. Find the value.
    2^0 = _____.
    2^1 = _____.
    2^2 = _____.
    $2^3 + 2^0$ = _____.
22. Which of the shapes given below have at least 2 lines of symmetry?

IV. Answer the following: (Any 4) **4 x 5 = 20**

23. Write the order of symmetry and the angle of rotation symmetry, for the following figures.



24. Prepare a poster on pascals triangle and highlight any four properities.
25. Draw lines of symmetry for the following figures.



26. What is the sum of the numbers in row 8 of the pascals triangle? Write it as a power of 2.
27. Define Asymmetry, and Illustrate it with an example.