Aniket Ray

MANAVA BHARATI

INDIA INTERNATIONAL SCHOOL

SUMMATIVE ASSESSMENT – I

SUBJECT: MATHEMATICS **MAX. MARKS: 90**

CLASS: VIII **TIME: 3 HOURS**

General Instructions:

1. SEC A: Q.1 TO 10 IS OF ONE MARK EACH.
2. SEC B: Q.11 TO 21 IS OF TWO MARK EACH.
3. SEC C: Q.22 TO 31 IS OF THREE MARK EACH.
4. SEC D: Q.32 TO 38 IS OF FOUR MARK EACH.

SEC – A

1. The value of x in $\frac{-20}{x} = \frac{-4}{3}$ is:

   a) 18 b) 12 c) 15 d) 50

2. Consecutive angles of parallelogram are:

   a) equal b) supplementary c) complementary d) none of these

3. If $m = n^2$, then square root of m is:

   a) n^2 b) n c) mn d) mn^2

4. If m is a non – zero number, then the cube of m is

   a) m^2 b) m c) $m^2 \times m$ d) none of these

5. The value of $(-1)^{-1}$ is:

   a) -1 b) 1 c) 0 d) none of these

6. A quadrilateral with one pair of parallel sides is called a:

   a) parallelogram b) trapezium c) rhombus d) rectangle

7. If two quantities x and y are in direct proportion, then:

   a) x/y remains constant b) xy remains constant c) x – y remains constant d) none of these

8. Sum of the angles of a polygon of n sides is:

   a) $(2n - 4) \times 180^0$ b) $(n - 2) \times 90^0$ c) (2n – 4) right angles d) none of these

B

9. If 5 toys cost Rs. 215, then the cost of 7 toys is:
   a) Rs. 201 b) Rs. 301 c) Rs. 401 d) Rs.501

10. In power notation (- 7) x (- 7) x (- 7) can be written as:
   a) $(-7)^{-3}$ b) $(-7)^{3}$ c) $(7)^{4}$ d) $-(7)^{-3}$

SEC – B

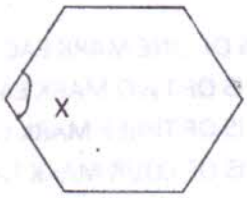
11. Subtract - 5/12 from – 5/8.

12. Find the other two members of the Pythagorean triplets, one of whose member is 22.

13. The cost of two dozens of Apples is Rs. 108. What is the cost of 144 Apples?

14. Simplify : $\left[\left(\frac{-5}{3}\right)^{-2}\right]^{-3}$

15. Find the angle measure x in the given regular polygon.



16. Evaluate : $\left(\frac{3}{8}\right)^{2+7} \div \left(\frac{3}{8}\right)^{9}$

17. Find the cube root of : (- 5832) x (216).

18. Simplify and express with positive exponents: $\left(\frac{-2}{5}\right)^{-3} \times \left(\frac{-2}{5}\right)^{-4}$.

19. Express 3.03×10^{-5} in the usual form.

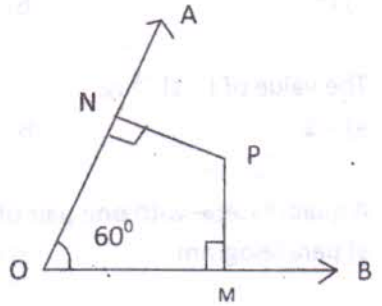
20. How many numbers lie between the squares of 100 and 101?

21. Find the cube of $\left(5 - \frac{3}{7}\right)$.

SEC – C

22. Determine three rational numbers between - 4 and $\frac{5}{4}$.

23. In the given figure, P is a point in the interior of ∠AOB.
   PM ⊥ OB and PN ⊥ OA. If ∠NOM = 60^0, what is the measure of ∠NPM?



24. By what smallest natural number should - 6125 be multiplied so that the product becomes a perfect cube?

25. Find the least square number exactly divisible b each one of the numbers : 6, 9, 10, 15 and 20.

26. Simplify : $\frac{25 \times t^{-4}}{5^{-3} \times 10 \times t^{-8}}$

27. It is given that p varies directly as q:
    i) Write an equation which relates p and q. Find the constant of variation, if p is 6 and q is 24.
    ii) Find p , when q is 120.

28. Find the square root of 96.04 without division.

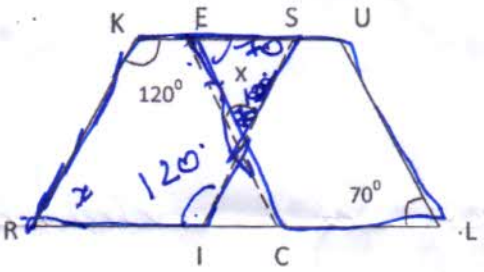
29. A 5 m 60 cm high vertical pole casts a shadow 3 m 20 cm long. Find at the same time:
    i) The length of the shadow cast by another pole 10 m 50 cm high.
    ii) The height of a pole which casts a shadow 5 m long.

30. Evaluate : $\left(\frac{2}{3} \times \frac{-5}{4}\right) + \left(\frac{-10}{3} \times \frac{5}{2}\right) - \left(\frac{-16}{3} \times \frac{-55}{32}\right)$

31. Medha and Shreya wants to makes a cuboid of plasticine of sides 7 cm, 4 cm, 7 cm. How many such cuboids will they need to form a cube? What value are they showing?

SEC – D

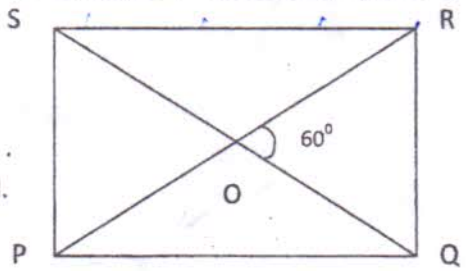
32. In the figure, both RISK and CLUE are parallelograms.
    Find the value of x.



33. Three angles of a quadrilateral are in the ratio 4 : 5 : 3.
    The difference of the least and the greatest of these angles is 42^0. Find all the four angles of the quadrilateral.

34. The area of a square field is 1789.29 m^2. Find the distance covered by an athlete if he takes 4 round of it.

35. The diagonals of a rectangle PQRS intersect at O.
    If $\angle ROQ = 60^0$, find $\angle OSP$.



36. Using a property simplify and verify. Also name the property used.

    $5 \times \left[\frac{2}{7} + \left(\frac{-8}{9}\right)\right]$

37. i) By what number should $\left(\frac{4}{3}\right)^{-3}$ be divided so that the quotient is $\left(\frac{16}{9}\right)^{-2}$?
    ii) If $(3^{2x+1} + 9) \div 9 = 10$, find the value of x.

38. i) Find the smallest natural number by which 8640 must be divided so that the quotient is a perfect cube.
    ii) Observe the following:
    $4^3 = 64$, $12^3 = 1728$ and $7^3 = 343$, $11^3 = 1331$
    State the properties derived from the above observations.