

INTERNATIONAL INDIAN SCHOOL – DAMMAM
SUMMATIVE ASSESSMENT – I (2014-15)
MATHEMATICS

CLASS: VIII

SET – A

TIME: 3 Hours
Max.Marks:90

General Instructions:-

1. All questions are compulsory.
2. Section A – Questions 1 – 8 carry 1 mark each
3. Section B – Questions 9 – 14 carry 2 marks each.
4. Section C – Questions 15 – 24 carry 3 marks each.
5. Section D – Questions 25 – 34 carry 4 marks each.
6. There is no overall choice. However, internal choice has been given in each section.

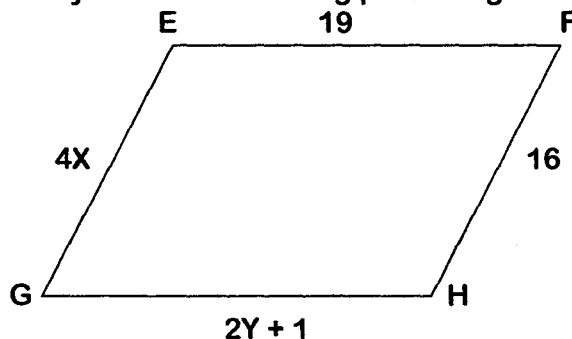
SECTION – A (1 X 8 = 8 MARKS)

Choose the correct answer:

1. The rational number which is equal to its negative is _____.
(a) 1 , (b) - 1 , (c) 0 , (d) 2 .
2. How many measures are required to construct a quadrilateral?
(a) 3, (b) 4 , (c) 5 , (d) 6.
3. The additive inverse of $\frac{-7}{-8}$ is _____.
(a) $\frac{7}{8}$, (b) $\frac{-7}{8}$, (c) $\frac{8}{7}$, (d) $\frac{-8}{7}$.
4. If the diagonals of a quadrilateral are equal and bisect each other at right angles, then the quadrilateral is a _____.
(a) Rhombus, (b) square, (c) rectangle, (d) parallelogram.
5. The number of digits in the square root of a number having 5 digits is _____.
(a) 1 , (b) 2 , (c) 3, (d) 4.
6. What is the value of the expression $[2^3 \times 8^{-2}]$.
(a) 2^6 , (b) 2^{-3} , (c) 2^{-6} , (d) 2^3 .
7. The unit place digit of the cube of 149 is _____.
(a) 9 , (b) 1 , (c) 3 , (d) 7.
8. The multiplicative inverse of 9^4 is _____.
(a) 9^{-1} , (b) $9^{1/4}$, (c) 9^{-4} , (d) 1.

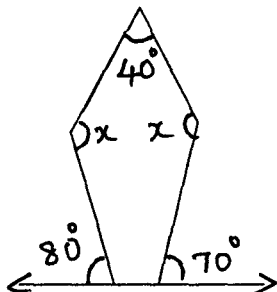
SECTION - B (2 X 6 = 12 MARKS)

9. Multiply $\frac{7}{15}$ by the reciprocal of $(-\frac{7}{30})$.
10. Find the cube root of 15625 by prime factorization method.
11. How many sides does a regular polygon have if each of its interior angle is 150° ?
12. Simplify $(3^{-6} \div 3^{-11}) \times 3^{-5}$
13. Find the square root of 7921 by long division method.
OR
Find the square of 42, without actual multiplication.
14. Find the value of x and y from the following parallelogram EFGH.



SECTION - C (3 X 10 = 30 MARKS)

15. Solve using suitable properties :- $(-\frac{2}{3}) \times \frac{5}{7} + \frac{3}{4} + \frac{2}{7} \times (-\frac{2}{3})$.
16. Find the square root of 51.84.
OR
7744 plants are planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows.
17. Find the angle measure 'x' in the following figure.



18. Find the smallest number by which 256 must be multiplied to obtain a perfect cube.

19. Simplify: (a) $\left[\left(\frac{1}{3}\right)^{-2} - \left(\frac{1}{2}\right)^{-3}\right] \div \left(\frac{1}{4}\right)^{-2}$.

(b) $(2^{-1} \times 4^{-1}) \div 2^{-2}$.

20. (a). Find four rational numbers between $\left(-\frac{3}{2}\right)$ and $\left(-\frac{5}{3}\right)$.

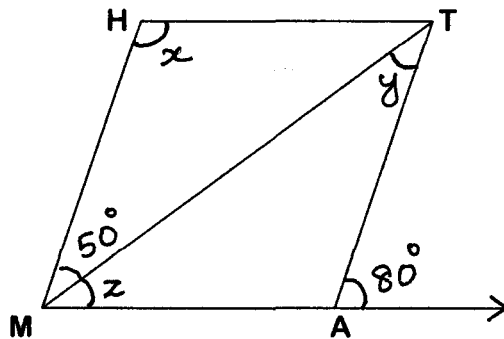
(b). Represent $\left(-\frac{2}{7}\right)$ and $\left(-\frac{4}{7}\right)$ on a number line.

21. Construct a quadrilateral PQRS where PQ = 4cm, QR = 5 cm, RS = 5 cm, PS = 5.5 cm, and PR = 7 cm.

22. Find the value of 'm' so that $(-2)^{m+1} \times (-2)^4 = (-2)^6$.

23. Construct a square ABCD with AB = 4.7 cm.

24. In the figure MATH is a parallelogram. Find the angle measure of x, y and z. State the properties used to find them.



SECTION - D (4 X 10 = 40 MARKS)

25. (a) The measure of two adjacent angles of a parallelogram are in the ratio 4 : 5. Find the measure of each of the angles of the parallelogram.

(b) What is the sum of the angles of a convex polygon which has 12 sides?

26. Construct a rhombus BEND where BN = 5.6 cm and DE = 6.5 cm.

OR

Construct a quadrilateral TRUE, where TR = 4.5 cm, RU = 5 cm, UE = 5.5 cm, $\angle R = 70^\circ$, $\angle U = 90^\circ$.

27. Find the smallest natural number by which 53240 must be divided to get a perfect cube. Also find the cube root of the perfect cube so obtained.

28. (a). Verify $a \times (b + c) = a \times b + a \times c$, where $a = \left(-\frac{3}{4}\right)$, $b = \frac{2}{3}$ and $c = \frac{5}{6}$.

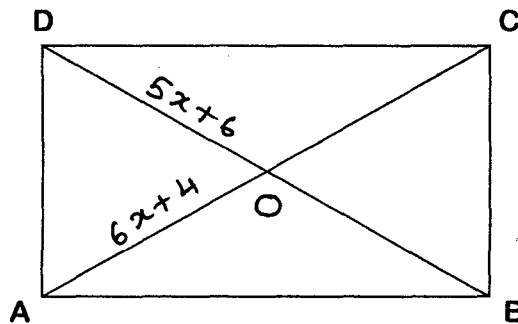
(b). Identify the property used:

(i) $\frac{5}{7} \times 1 = 1 \times \frac{5}{7} = \frac{5}{7}$.

(ii) $\frac{3}{5} + \left[\frac{5}{4} + \frac{7}{8}\right] = \left[\frac{3}{5} + \frac{5}{4}\right] + \frac{7}{8}$.

29. Find the greatest 4 – digit number which is a perfect square.

30. ABCD is a rectangle. Its diagonals meet at O. Find x if OA = 6x + 4 and OD = 5x + 6. Also find the length of AC. (length in cm).



31. Construct a quadrilateral MNOP, where MN = 4cm, NO = 6.5 cm, $\angle M = 90^\circ$, $\angle O = 110^\circ$, $\angle P = 85^\circ$.

32. Find the smallest square number that is divisible by each of the numbers 6, 9 and 15. Also find the square root of the square number so obtained.

33. (a). Simplify using laws of exponents

$$\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$$

(b). Express 0.00000631 in the standard form.

34. A gardener has 1000 plants. He wants to plant these in such a way that the number of rows and the number of columns remain same. Find the minimum number of plants he needed more for this.
