**JIYA LAL MITTAL DAV PUBLIC SCHOOL**

**GRADE – VII SA-I (SEPT, 2015)**

**SUBJECT – MATHEMATICS**

**TIME: 3hrs. M.M-90**

**General Instructions:**

1. **The question paper consists of four sections A,B,C,D.**
2. **Section A consists of 10 questions of 1mark each, Section B consists of 10 questions of 2marks each, Section C consists of 10 questions of 3marks each, and Section D consists of 6 questions of 5marks each**
3. **All questions are compulsory.**

**Section-A**

1. Absolute value of $\frac{-5}{7}$ is:
2. $\frac{5}{7} $ (b) $\frac{-5}{7}$ (c) $\frac{-7}{5}$ (d) $\frac{7}{5} $
3. Compare $-\frac{5}{7} -\frac{3}{7}$
4. > (b) < (c) = (d) none of these
5. X+(Y+Z) \_\_\_\_\_\_\_ (X+Y)+Z
6. = (b) ≠ (c) > (d) <
7. Decimal form of $\frac{7}{20} $is
8. 0.5 (b) 0.3 (c) 0.35 (d) 35
9. Which one is true?
10. $P^{2}+B^{2}=H^{2}$ (b) $P^{2}+H^{2}=B^{2}$

(c) $H^{2}+B^{2}=P^{2}$ (d) $P^{2}-B^{2}=H^{2}$

1. How many lines of symmetry can be in A?
2. One (b) two (c) three (d) infinite
3. The sum of three angles of a ∆ is
4. 360° (b) 180° (c) 90° (d) 60°
5. Which is not the condition of the congruent triangles?
6. SSA (b) RHS (c) SAS (d) ASA
7. $x^{a}×x^{b} $is equal to
8. $x^{ab}$ (b) $x^{a+b}$ (c) $x^{a-b}$ (d) $ab^{x}$
9. Fill in the box: $\frac{2}{7}=\frac{8}{}$
10. 20 (b) 28 (c) 16 (d) 14

**Section-B**

1. Express $\frac{4}{7} $as a rational number with denominator 84.
2. Find the value of x, if $\frac{x}{12}=\frac{5}{6}$
3. Find the value of: $\frac{7}{11}+\frac{1}{4} $
4. The sum of two rational number is $\frac{5}{3}$. If one of the number is $\frac{2}{3} ,$ find the other number.
5. Compute the product of decimal:

27 X 13.52

1. Simplify: $\left(\frac{5}{7}\right)^{6}÷\left(\frac{5}{7}\right)^{2} $
2. Convert 1,287,000 in the form K x 10n
3. Find $∠RPQ $from the given figure:

 P

 Q R X

1. Check given numbers are the sides of the triangle or not 6, 4, 8
2. If the dotted lines represent the lines of symmetry of the given angle, find the value of x.

**Section-C**

1. Arrange in ascending order:

$$\frac{-5}{7} , \frac{-3}{14} , \frac{-8}{21} $$

1. Simplify: $4 ×\left(\frac{7}{3}-\frac{9}{10}\right)$
2. Find the value of x

$$\left(\frac{3}{4}\right)^{2x+1}=\left[\left(\frac{3}{4}\right)^{3}\right]^{3} $$

1. Simplify: $\left[\left(\frac{2}{5}\right)^{-1}×\left(\frac{3}{4}\right)^{-1}\right]^{-1} $
2. Complete the statement:
3. $∠BAY=∠ABC+\\_\\_\\_\\_\\_\\_\\_\\_$
4. $∠CBZ=\\_\\_\\_\\_\\_\\_\\_+\\_\\_\\_\\_\\_\\_\\_\\_$
5. $\\_\\_\\_\\_\\_\\_=∠CAB+∠ABC$ Y A

 B C

1. The hypotenuse of a right triangle is 17cm long. If one of the remaining two sides is of length 8cm. find the length of the third side.
2. In fig, QX bisects $∠PQR$ as well as $∠PSR.$ State the three facts needed to ensure that $∆QRS≅∆QPS$.

 P

 Q

 R

1. In figure, prove that $∆ABC≅∆AED$
2. Two poles of heights 6m and 11m stand on a plane ground. If the distance between their feet is 12m. find the distance between their tops.
3. How many lines of symmetry will the following have:
4. A nine-sided regular polygon
5. A quadrilateral
6. A Circle

**Section-D**

1. Simplify: $-\frac{4}{3}×\left(\frac{2}{5}+\frac{-7}{10}\right)=\left(\frac{-4}{3}×\frac{2}{5}\right)+\left(\frac{-4}{3}×\frac{-7}{10}\right)$
2. Simplify: $1.44×\left(144÷12\right)-0.225+3.276 $

or

By $x=\frac{-5}{3} , y=\frac{2}{7} , z=\frac{1}{-4} verify that $

 $\left(x+y\right)÷z=\left(x÷z\right) +\left(y÷z\right)$

1. Simplify: $\left[\left(\frac{2}{3}\right)^{2}\right]^{3}×\left(\frac{2}{3}\right)^{-4}×3^{-1}×\frac{1}{6} $

Or

 If $a=\left(\frac{3}{5}\right)^{-2}÷\left(\frac{7}{5}\right)^{0 }, find the value of a^{-3} $

1. In figure, find x and y

 A

 B C

 Or

In the given figure, find the measure of $∠1 , ∠2 , ∠3 $

1. Arrange in ascending order:

$$\frac{5}{3} , \frac{7}{9} , \frac{10}{12} , \frac{13}{6} $$

1. Write 3 English alphabets each having
2. One line of symmetry
3. Two lines of symmetry
4. No lines of symmetry