K.P.C. PUBLIC SCHOOL, KHARGHAR
Term I 2022-2023

STD: VII **MARKS: 50**
SUB: MATHS **TIME: 2 HRS**

Q1: CHOOSE THE CORRECT ANSWER: **(6M)**

1. Product of positive and negative integer is _____ integer.
   a. Negative b. Positive c. Neutral d. None of the above
2. Complement of 56^0 is _____.
   a. 25^0 b. 34^0 c. 41^0 d. 56^0
3. $(-1)^{999}$ = _____.
   a. +1 b. 2 c. 0 d. -1
4. Express $\left(\frac{3}{5}\right)^2$ in $\frac{p}{q}$ form.
   a. $\frac{3}{5}$ b. $\frac{9}{25}$ c. $\left(\frac{9}{25}\right)^2$ d. $\frac{9}{5}$
5. To construct a right-angled triangle, measurement of hypotenuse and _____ is required.
   a. One-side b. Two-side c. Angle d. None of the above
6. ASA construction criterion stands for _____.
   a. Angle-Side-Angle b. Angle-Angle-Side c. Side-Angle-Side d. Angle-Side-Side

Q2: SOLVE THE FOLLOWING: **(8M)**

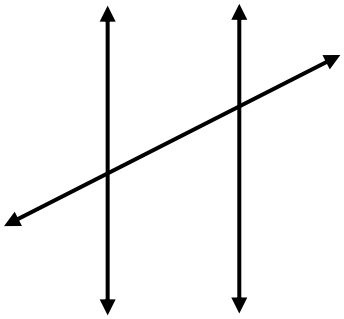
1. Divide $\frac{12}{13} \div \frac{1}{13}$
2. Write 4 more rational numbers in the following pattern:
   $\frac{5}{6}, \frac{10}{12}, \frac{15}{18}, \frac{20}{24}, \_\_, \_\_, \_\_, \_\_$
3. Compare 2^8 and 8^2
4. Draw line *p* parallel to line *q* and passing through the point *r*. (Point *r* should not lie on line *q*)

Q3: EVALUATE THE FOLLOWING: [Any 3] **(9M)**

1. Find the product of $\frac{-7}{16}$ x $\frac{24}{49}$ x $\frac{-28}{15}$ x $\frac{15}{-8}$
2. Simplify $\left[\left(\frac{-3}{4}\right)^5 x \left(\frac{-3}{4}\right)^3\right] \div \left(\frac{9}{16}\right)^4$
3. Construct a ΔABC with AB = 5cm, ∠B = 30^0 and BC = 5cm. name the type of this triangle on the basis of sides.
4. Simplify $\left[5\frac{1}{4} \div 2\frac{4}{5}\right] \div 1\frac{7}{8}$

Q4: EVALUATE THE FOLLOWING: [Any 3] **(12M)**

1. In the given figure,
   c is the transversal to parallel lines *a* and *b*.
   If ∠1 = 45 °, find the measures of
   ∠2, ∠3, ∠4, ∠5, ∠6, ∠7 and ∠8



2. Simplify $\frac{16^2 x\ 9^4 x 27}{6^3 x\ 12^4}$
3. Simplify and write the answer in exponential form

$$\left(\frac{(3bc^5)\ x\ (3a^2c)\ x\ (a^2)}{9b}\right)^2$$

4. Construct a ΔABC with AB=AC=4.9cm and BC = 5.5cm. Measure ∠B and ∠C.

Q5: SOLVE THE FOLLOWING: [Any3] **(15M)**

1. Express the following in expanded form:
   a. 82652872 b.9008701054 c.101010
2. a. Write in standard form: $0.00000000657 \times 10^{15}$
   b. Prove the following: $16^0 = 1$
   c. Find the value of x : $3^8 x\ 3^5 \div 3^{10} = 3^x$
   d. Simplify $(16^0 x\ 5^0) + (4^0 + 2^0) - (8^0 - 6^0)$
3. Construct a right-angled triangle DEF in which hypotenuse DF=5cm and side DE=4cm. Name the vertex at which the right angle is formed.
4. Construct a ΔABC in which AB=4cm, BC = 5.3cm and $\angle B = 70^0$. Also, draw the perpendicular bisector of AC.