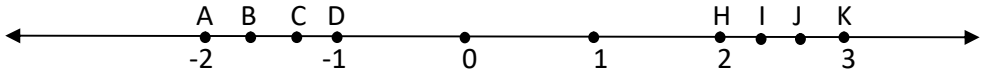
MATHS HOLIDAYS HOMEWORK

CLASS VII

1. Find the value of x if the following pairs of rational numbers are equivalent:
   i) $\frac{4}{5}, \frac{x}{95}$ ii) $2\frac{1}{5}, \frac{x}{-15}$
2. Represent $\frac{5}{7}, \frac{7}{5}$ and $\frac{3}{-11}$ on the number line.
3. Arrange these rational numbers in ascending order: $\frac{-4}{3}$, $\frac{-13}{-4}$, $\frac{15}{-20}, \frac{7}{-12}$
4. Add rational numbers $\frac{-3}{7}$, $\frac{-5}{8}$ and $\frac{13}{28}$
5. Subtract i) $\frac{-4}{9}$ from $\frac{1}{9}$ ii) $\frac{3}{4}$ from $\frac{1}{-12}$
6. The sum of two rational numbers is $\frac{-18}{21}$. If one rational number is $\frac{-3}{7}$, find the other.
7. What should be added to $\frac{-5}{14}$ to get $\frac{-2}{21}$?
8. Simplify: i) $\frac{51}{45} \times \frac{21}{17} \times \frac{5}{7}$ ii) $(\frac{-3}{5} \times 1\frac{3}{5}) - (1\frac{1}{3} \times 2\frac{1}{4})$
9. Divide i) $\frac{17}{24}$ by $\frac{7}{8}$ ii) $\frac{-13}{22}$ by $\frac{5}{-1}$
10. A carpenter has a board which is $\frac{2}{3}$ m thick. He cuts $\frac{1}{9}$ m thick section out of it. How many total sections will he cut?
11. The product of two rational numbers is $\frac{-5}{16}$. If one of them is $\frac{3}{32}$, find the other.
12. Without actual division, determine which of the following rational numbers have a terminating decimal representation:
    i) $\frac{7}{25}$ ii) $\frac{19}{65}$ iii) $\frac{18}{45}$ iv) $\frac{12}{91}$
13. On the number line, if AB=BC=CD=HI=IJ=JK, then Find the rational number represented by: B, C, I and J.



14. Simplify: i) $\frac{3}{7} - (\frac{-11}{14}) + \frac{8}{21}$ ii) $[\frac{(-5)}{7} + \frac{1}{3}] \div [\frac{12}{21} + 1]$
15. Find the decimal representation of: i) $\frac{1}{8}$ ii) $\frac{1}{16}$ iii) $\frac{40}{25}$ iv) $\frac{1}{50}$
16. If $\frac{a}{b} \div \frac{5}{-2} = \frac{10}{12}$, then what is the value of $\frac{a}{b}$?
17. Which is greater: the product of $\frac{-7}{16}$ and $\frac{32}{-35}$ or the quotient of $\frac{3}{11}$ and $\frac{-21}{44}$?
18. Complete the following tables:

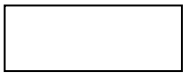
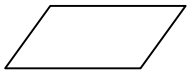
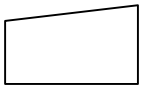
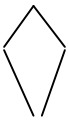
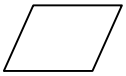
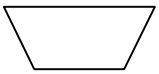
i)

Alphabet Letters	Line of Symmetry	Number of lines of Symmetry
Z	No	
S		
H	Yes	
O		
E		
C		

ii)

Polygon	Number of sides	Number of Lines of symmetry
Equilateral triangle		
Square		
Regular pentagon		
Regular hexagon		
Regular heptagon		

iii)

Name of 2-D geometrical shape	Number of lines of symmetry	Draw lines of Symmetry
Square		
Rectangle		
Parallelogram		
General Quadrilateral		
Kite		
Rhombus		
Isosceles Trapezium		

NOTE: The worksheet should be solved on loose sheets and submitted in a folder.

PROJECT WORK: Exploring Symmetry in Nature.

Collect pictures of symmetrical objects in nature and paste them in a scrap book. Draw their lines of symmetry too.