THE LAWRENCE SCHOOL, LOVEDALE

Subject Enrichment Activity–MAY-2019

MATHEMATICS - CLASS 8

Chapter – Rational Numbers

1. **Verify that:**

(i) $\frac{-1}{2}+\left[\left(\frac{-4}{3}\right)+\frac{3}{7}\right]$ and $\left[\left(\frac{-1}{2}\right)+\frac{3}{7}\right]+\left(\frac{-4}{3}\right)$ are there same

(ii) $\frac{2}{3}\times\left[\frac{-6}{7}+\frac{4}{5}\right]=\left[\frac{2}{3}\times\frac{4}{5}\right]\times\left(\frac{-6}{7}\right)$

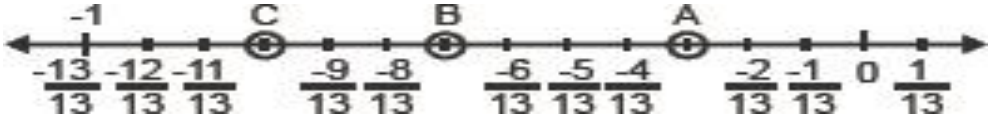
2. **Find:** $\frac{5}{22}+\frac{3}{7}+\left(\frac{-8}{21}\right)+\left(\frac{-6}{11}\right)$

3. **Find:** $\left(\frac{-14}{9}\right)\times\frac{3}{5}\times\left(\frac{-4}{7}\right)\times\frac{15}{16}$

4. Find three rational number between $\frac{3}{7}$ and $\frac{2}{3}$.

5. Find 10 rational numbers between $\left(-\frac{2}{3}\right)$ and $\frac{2}{3}$.

6. Write the rational number represented by the points a, B, and C on the following number line:



7. The product of two rational numbers is $\left(\frac{-28}{81}\right)$. if one of them is $\frac{-2}{3}$, then find the other:

Chapter – Linear Equations in One Variable

1. **Solve the following Equations:**

a) $\frac{2x-5}{3x-1} = \frac{2x-1}{3x+2}$ b) $\frac{3-7x}{15+2x} = 0$ c) $\frac{0.4y-3}{1.5y+9} = \frac{-7}{5}$

d) $\frac{2}{3x-1} = \frac{3}{3x+1}$ e) $\frac{y}{2} - \frac{1}{2} = \frac{y}{3} + \frac{1}{4}$ g) 15(x - y) - 3(x - 9) + 5(x + 6) = 0

2. The sum of the digits of a two digit number is 7. If the number formed by reversing the digits is less than the original number by 27, find the original number.
The sum of three consecutive odd numbers is 51. Find the numbers.

3. Rene is 6 years older than her younger sister. After 1 0 years, the sum of their ages will be 50 years. Find their present ages.

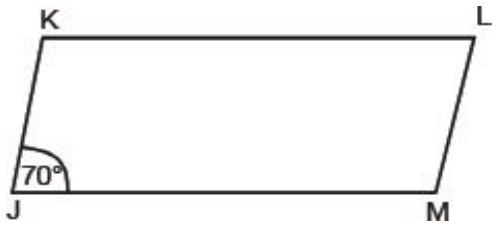
4. The length of a rectangle is 10 m more than its breadth. If the perimeter of rectangle is 80 m, find the dimensions of the rectangle.

5. In an isosceles triangle, the base angles are equal and the vertex angle is 80°. Find the measure of the base angles.

Chapter – Understanding Quadrilaterals

1. PQRS is a parallelogram such that m∠R = 110°, then find m∠P and ∠S.

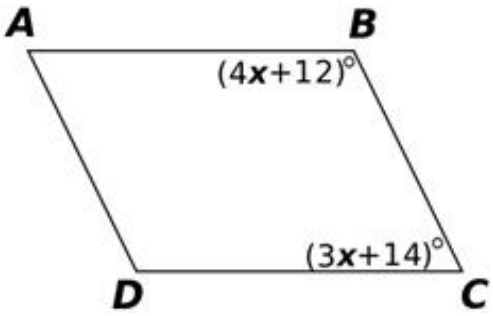
2. JKLM is a parallelogram. If m∠J = 70°, then find all other angles.



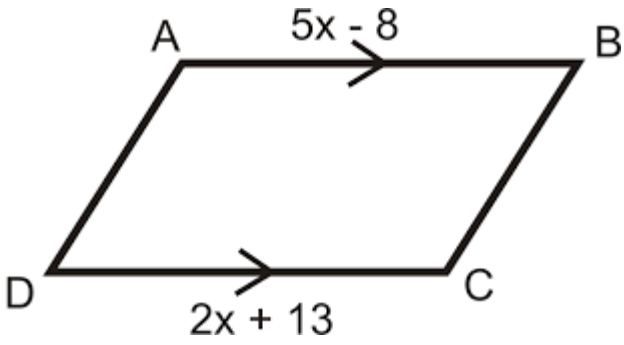
3. The exterior angle of a regular polygon is one-fifth of its interior angle. How many sides the polygon has?

4. Find the value of x from the following figures:

(i)



(ii)



Chapter – Practical Geometry

1. Construct a quadrilateral ABCD in which AB= 5 cm, BC= 6.5 cm, angle A= 75°, angle B= 105° and angle C= 120°.

2. Construct a quadrilateral WXYZ when WX= 3.3 cm, XY= 4cm, YZ= 4.1 cm, WZ= 3.6 cm and XZ= 5.5 cm.

3. Construct a rhombus whose diagonals are 6.2 cm and 8.4 cm.

4. Construct a quadrilateral BEST, given ES= 4.5cm, BT= 5.5 cm, St= 5 cm, the diagonal BS= 5.5 cm and diagonal ET= 7 cm. Find Angle E, Angle T and RE.