Class 7

Important Formulas

Chapter 9 – Rational Numbers

1. Numbers that can be expressed in the form $\dfrac{p}{q}$, where q is a non-zero integer and p is any integer are called rational numbers.

2. Every integer is a rational number but a rational number need not be an integer.

3. Every fraction is a rational number but a fraction need not be a rational number.

4. A rational number $\dfrac{p}{q}$ is said to be in the standard form if q is a positive integer and the integers $\dfrac{p}{q}$ have no common divisor other than 1.

5. A rational numbers $\dfrac{p}{q}$ is positive, if p and q are either both positive or both negative.

6. A rational number $\dfrac{p}{q}$ is negative, if p and q are of opposite signs.

7. Two rational numbers are equal if they have the same standard form.

8. To convert a rational number to an equivalent rational number, either multiply or divide both its

numerator and denominator by a non-zero integer.

9. If $\dfrac{x}{y}$ is a rational number and m is any non-zero integer, then $\dfrac{x}{y} = \dfrac{x \times m}{y \times m}$

10. If $\dfrac{x}{y}$ is a rational number and m is a common divisor of x and y, then $\dfrac{x}{y} = \dfrac{x \div m}{y \div m}$

11. If x and y are positive integers, then the rational numbers $\dfrac{x}{y}$ and $\dfrac{-x}{-y}$ both positive and the rational numbers $\dfrac{-x}{y}$ and $\dfrac{x}{-y}$ negative.

12. $\dfrac{a}{b} = \dfrac{c}{d}$ only when $a \times d = b \times c$.

13. If there are two rational numbers with common denominator, then one with the larger numerator is larger than the other.

14. Every positive rational number is greater than zero.

15. Every negative rational number is less than zero.

16. The rational numbers can be represented on the number line.