**The City School**



**North Nazimabad Boys Campus**

**Mathematics - Class 7 (Ms. Hira Asad)**

**IMPORTANT FORMULAE**

1. **VOLUME AND SURFACE AREA**
2. **Volume of Cube = length3**
3. **Volume of Cuboid = length x width x height**
4. **Surface Area of Cube = 6 x L2**
5. **Surface Area of Cuboid = 2{(l x w) + (l x h) + (w x h)}**
6. **Surface Area of Rectangular Open Water Tank = L x W + 2{ (L x h) + (w x h)}**
7. **TIME**
8. **Arrival = Departure + Journey**
9. **Departure = Arrival – Journey**
10. **Journey = Arrival – departure**
11. **PERCENTAGES**
12. **Increase in % =** $\frac{100+increase}{100} x Original value$
13. **Decrease in % =** $\frac{100-decrease}{100} x Original value$
14. **Percentage Change =** $\frac{New Value-Original Value }{Original Value} x 100$
15. **PROPORTIONS**
16. **Direct Proportion :** $\frac{x\_{1}}{x\_{2}}$ = $\frac{y\_{1}}{y\_{2}}$
17. **Indirect Proportions : :** $\frac{x\_{1}}{x\_{2}}$ = $\frac{y\_{2}}{y\_{1}}$
18. **FUNCTIONS AND GRAPHS**
19. **Gradient =** $\frac{vertical change}{horizontal change}$
20. **DATA HANDLING**
21. **Mode is the most occurring value**
22. **Mean =** $\frac{Sum of data}{No.of Data}$
23. **Middle Position for median =** $\frac{n+1}{2}$ , where ‘n’ is the number of data
24. **Angle of sector (pie chart) =** $\frac{NO.of Data}{Total no.of data} x 360$