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| Density | $$Density= \frac{Mass}{Volume}$$ | $$D=\frac{m}{V}$$ |
| Speed | $$Speed=\frac{Distance}{Time}$$ | $$s= \frac{d}{t}$$ |
| Velocity | $$Velocity =\frac{Distance}{Time}$$ | $$v=\frac{d}{t}$$ |
| Acceleration | $$Acceleration=\frac{Final Velocity-Initial Velocity}{Change in Time}$$ | $$a=\frac{v\_{f}- v\_{i}}{∆t}$$ |
| Force | $$Force=Mass x Acceleration$$ | $$F=ma$$ |
| Weight | $$Force Weight=Mass x Gravity$$ | $$F\_{w}=mg$$ |
| Momentum | $$Momentum=Mass x Velocity$$ | $$p=mv$$ |
| Conservation of Momentum | $$Mass of Object 1 x Velocity of Object 1=Mass of Object 2 xVelocity of Object 2$$ | $$m\_{1}v\_{1}=m\_{2}v\_{2}$$ |
| Kinetic Energy | $$Kinetic Energy= \frac{1}{2} (Mass x Veloctiy^{2})$$ | $$KE= \frac{1}{2}mv^{2}$$ |
| Gravitational Potential Energy | $$Graviational Potential Energy=Mass x Gravity x Height$$ | $$PE=m∙g∙h$$ |
| Potential Energy | $$Potential Energy=Force Weight x Height$$ | $$PE= F\_{w}∙h$$ |
| Conservation of Energy | $$Total Energy=Kinetic Energy+Potential Energy$$ | $$TE=KE+PE$$ |
| Ohm’s Law | $$Voltage=Current x Resistance$$ | $$V=IR$$ |
| Electric Power | $$Electical Power=Voltage x Current$$ | $$P=VI$$ |
| Electric Energy | $$Electric Energy=Electric Power x Time$$ | $$E=Pt$$ |
| Wave | $$Velocity of a Wave=Frequency x Wave Length$$ | $$v=fλ$$ |
| Heat | $$Heat Gained or Lost=Mass x Change in Temperature x Specific Heat of a Substance$$ | $$Q=m∙ΔT∙Cp$$ |

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| Constants / Conversions |
| $$g=accerlation due to Gravity= 9.8 ^{m}/\_{s^{2}}$$ |
| $$speed of sound=343^{m}/\_{s}at sea level and 20℃$$ |
| $$1 cm^{3}=1 mL$$ |
| $$1 \frac{wave cycle}{second}=1 hertz (Hz)$$ |
| $$1 calorie \left(cal\right)=4.18 Joules (J)$$ |
| $$1000 calories \left(cal\right)= 1 Calorie \left(Cal\right)= 1 kilocalorie (kcal)$$ |
| $$newton \left(N\right)= kg∙^{m}/\_{s}$$ |
| $$joule \left(J\right)= Nm$$ |
| $$watt \left(W\right)= ^{J}/\_{s}=N∙^{m}/\_{s}$$ |
| *volt (V) ampere (A) ohm (Ω)* |

