# Conversions and Unit Analysis

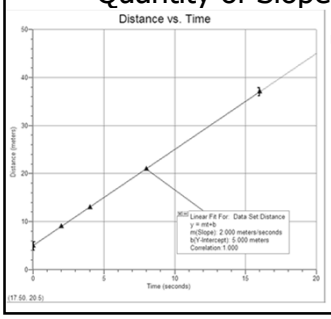
1

## Conversions
(Using T-Charts and Metric Conversions)

- Convert 45.0 cm/min to m/s.
- Convert 32 km/hr to m/s.

2

## Unit Analysis to Find Physical Quantity of Slope

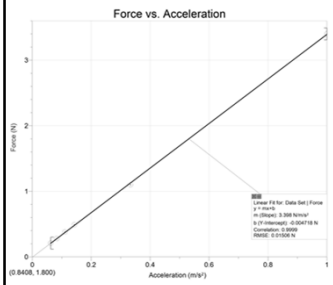



- Slope

| Quantity | Units |
|---|---|
| Force | N or kg m/s$^2$ |
| Acceleration | m/s$^2$ |
| Mass | kg |
| Velocity | m/s |
| Distance | m |
| Time | s |
| Energy | J or kg m$^2$/s$^2$ |

3

## Unit Analysis to Find Physical Quantity of Slope




- Slope

| Quantity | Units |
|---|---|
| Force | N or kg m/s$^2$ |
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| Energy | J or kg m$^2$/s$^2$ |

4

## Unit Analysis to Find a Possible Equation.

- $v = v_0 + at^3$
- $x = v_0 t + \frac{1}{2}at^2$
- $U_g = mgh$

| Quantity | Units |
|---|---|
| Force | N or kg m/s$^2$ |
| Acceleration | m/s$^2$ |
| Mass | kg |
| Velocity | m/s |
| Distance | m |
| Time | s |
| Energy | J or kg m$^2$/s$^2$ |

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