**Geometry, Measurement and Finance 10 – Conversions**

**SI length Imperial length**

|  |
| --- |
| 1 cm = 10 mm1 m = 100 cm1 km = 1000 m |

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| --- |
| 1 m = 1.0936 yd1 mi. = 1.6093 km1 in. = 2.54 cm1 m = 3.2808 ft. |

|  |
| --- |
| 1 ft. = 12 in.1 yd = 3 ft.1 mi. = 1760 yd |

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|  **SI Capacity**: 1L = 1000 mL 1 kL = 1000 L**SI Volume**: 1 $cm^{3}$= 1 mL |

**TEMPERATURE CONVERSIONS…**

 **C =** $\frac{5}{9}\left(F-32\right)$ **F =** $\frac{9}{5}C+32$

**SI mass Imperial mass**

|  |  |  |
| --- | --- | --- |
|  1 g = 1000 mg1 kg = 1000 g1 t = 1000 kg |  1 kg = 2.2 lbs 28.4 g = 1 oz |  1 lb = 16 oz 1 tn = 2000 lb  |

|  |  |
| --- | --- |
| ***US Imperial*** | ***SI*** |
| 1 fl oz | 29.5735 mL |
| 1 pt = 16 fl oz | 473.176 mL or 0.473 L |
| 1 qt = 2 pt | 946.352 mL or 0.946 L |
| 1 gal = 4 qt | 3785.4 mL or 3.785 L |

**Converting Common Cooking Units**

|  |  |
| --- | --- |
| ***Imperial*** | ***SI*** |
| $^{1}/\_{4 }$teaspoon | 1.25 mL |
| $^{1}/\_{2 }$teaspoon | 2.5 mL |
| 1 teaspoon | 5 mL |
| 1 tablespoon (3 teaspoons) | 15 mL |
| 1 cup | 250 mL |
| 1 pint | 568.2614 mL |
| 1 quart (2 pt) | 1.1365 L |
| 1 gallon (4 qt) | 4.5461 L |

**Geometry, Measurement and Finance 10 – Formulas**

**Area of 2-D shapes**

$A\_{rectangle}=lw$

$A\_{triangle}=\frac{bh}{2}$

$A\_{circle}=πr^{2}$ Circumference = $ 2πr$ **or** $πd$

$A\_{trapezoid}=\frac{h\left(a+b\right)}{2}$

**Surface Area and Volume of 3-D objects**

$SA\_{prism}=Add area of all the faces$ $ V\_{prism or cylinder}=A\_{base }x h$

$SA\_{cylinder}=2πr^{2}+2πrh$ $ V\_{cone or pyramid}=\frac{A\_{base }x h}{3}$

$SA\_{cone}=πr^{2}+πrs$ $V\_{sphere}=\frac{4}{3}πr^{3}$

$SA\_{pyramid}=A\_{base}+(area of the triangular faces)$

$SA\_{sphere}=4πr^{2}$

**Trigonometry Finance**

$c^{2}=a^{2}+b^{2}$ Simple Interest I = Prt

$sinθ=\frac{opp}{hyp}$ Compound Interest A = P$\left(1+\frac{r}{n}\right)^{nt}$

$cosθ=\frac{adj}{hyp}$

$tanθ=\frac{opp}{adj}$