Mathematical Literacy - Finance Extended Study Guide

Mathematical Literacy - Complete Formula Sheet

--- FINANCE ---
Simple Interest: $I = P \times r \times t$
Compound Interest: $A = P \times (1 + r)^t$, Interest = A - P
VAT: VAT = Price excl. VAT x 0.15
Price incl. VAT = Price excl. VAT x 1.15
Price excl. VAT = Price incl. VAT ÷ 1.15
Profit = Selling Price - Cost Price
Loss = Cost Price - Selling Price
Profit % = (Profit ÷ Cost Price) x 100
Loss % = (Loss ÷ Cost Price) x 100
Break-even units = Fixed Costs ÷ (Selling Price - Variable Cost)
Foreign Amount = Local Amount ÷ Exchange Rate
Local Amount = Foreign Amount x Exchange Rate
Inflation Increase = Original Price x (Rate ÷ 100)
New Price = Original Price + Inflation Increase

--- MEASUREMENT ---
Perimeter of rectangle = 2(l + w)
Area of rectangle = l x w
Area of triangle = 0.5 x base x height
Area of circle = $pi \times r^2$
Circumference of circle = 2 x pi x r
Volume of rectangular prism = l x w x h
Volume of cylinder = $pi \times r^2 \times h$
Surface area of cube = $6 \times (side^2)$
Surface area of rectangular prism = 2(lw + lh + wh)
Speed = Distance ÷ Time
Distance = Speed x Time
Time = Distance ÷ Speed
Temperature conversion: F = (C x 9/5) + 32, C = (F - 32) x 5/9

--- MAPS & PLANS ---
Actual Distance = Map Distance x Scale Factor
Map Distance = Actual Distance ÷ Scale Factor
Scale Factor = Actual Distance ÷ Map Distance

--- DATA HANDLING ---
Mean = (Sum of values) ÷ (Number of values)
Range = Highest - Lowest
Median = Middle value when ordered
Mode = Most common value

--- PROBABILITY ---
P(Event) = (Number of favourable outcomes) ÷ (Total possible outcomes)
P(Not Event) = 1 - P(Event)