Quick Reference — Functional Skills Maths Level 2

rewired for parents | Stick this on the fridge!

Percentages & Interest

- Percentage change = (change ÷ original) × 100
- Simple interest: I = P × r × t (principal × rate × time)
- Compound interest: Final = P × (1 + r)^n
- Reverse %: original = final ÷ (1 ± rate)

Ratio, Scale & Proportion

- Scale 1:25000 → 1cm on map = 25000cm = 250m in real life
- Direct proportion: if one doubles, the other doubles
- Inverse proportion: if one doubles, the other halves

Algebra & Formulas

- Substitute values: if a=3, b=5 then 2a+b = 2(3)+5 = 11
- Rearranging: do the same to both sides, reverse operations
- Solve: 3x + 7 = 22 → 3x = 15 → x = 5

Geometry & Angles

- Angles in triangle = 180° | Angles on straight line = 180°
- Angles in quadrilateral = 360° | Angles at a point = 360°
- Pythagoras: $a^2 + b^2 = c^2$ (right-angled triangles only)

Area, Volume & Surface Area

- Circle area = π × r^2 | Circumference = π × d
- Cylinder volume = π × r^2 × h
- Compound shapes: split into rectangles/triangles, add areas
- Surface area: find area of each face, add them up

Statistics & Probability

- Mean from frequency table = Σ(f×x) ÷ Σf
- Median position = (n+1) ÷ 2
- Combined probability (AND) = multiply | (OR) = add
- Expected frequency = probability × number of trials

Charts & Interpretation

- Scatter graphs: positive/negative/no correlation
- Line of best fit: draw through middle of points
- Two-way tables: row total + column total = grand total
- Pie chart: each sector = (value ÷ total) × 360°

Exam Tips

- Calculator allowed — but show method for full marks
- Multi-step problems: break into parts, solve each step
- Check units match the question (cm vs m, £ vs p)
- 2 hours for the exam — pace yourself, skip and return