

Topic: Calculating with Percentages

| Topic/Skill | Definition/Tips | Example |
|---|--|--|
| 1. Increase or Decrease by a Percentage | <p>Non-calculator: Find the percentage and add or subtract it from the original amount.</p> <p>Calculator: Find the percentage multiplier and multiply.</p> | <p><u>Increase 500 by 20% (Non Calc):</u> $10\% \text{ of } 500 = 50$ so $20\% \text{ of } 500 = 100$ $500 + 100 = 600$</p> <p><u>Decrease 800 by 17% (Calc):</u> $100\% - 17\% = 83\%$ $83\% \div 100 = 0.83$ $0.83 \times 800 = 664$</p> |
| 2. Percentage Multiplier | The number you multiply a quantity by to increase or decrease it by a percentage . | <p>The multiplier for increasing by 12% is 1.12</p> <p>The multiplier for decreasing by 12% is 0.88</p> <p>The multiplier for increasing by 100% is 2.</p> |
| 3. Reverse Percentage | <p>Find the correct percentage given in the question, then work backwards to find 100%</p> <p>Look out for words like 'before' or 'original'</p> | <p>A jumper was priced at £48.60 after a 10% reduction. Find its original price.</p> <p>$100\% - 10\% = 90\%$</p> <p>$90\% = £48.60$ $1\% = £0.54$ $100\% = £54$</p> |
| 4. Simple Interest | Interest calculated as a percentage of the original amount. | <p>£1000 invested for 3 years at 10% simple interest.</p> <p>$10\% \text{ of } £1000 = £100$</p> <p>Interest = $3 \times £100 = £300$</p> |