Year 9 · Number: Money, Mark-ups & GST

Name: _____ Date: _____

Kia ora! This sheet helps you work confidently with percentages, discounts, GST and simple interest, the maths behind real shopping and saving. Show your working and check each answer as you go.

Warm-up

1. Find 10% of $80.

2. Find 15% of $200.

3. Find 25% of $60.

4. Increase $50 by 20%.

Practice

5. Find the GST (15%) on $432.

6. A skateboard costs $120 before GST. What is the GST-inclusive price?

7. A shop in Avondale buys a phone case for $80 and marks it up by 35%. Find the selling price.

8. A pair of shoes normally priced at $90 is discounted by 20% in a Newmarket sale. What is the sale price?

9. Aroha deposits $2000 in a savings account earning 4% simple interest per year. How much interest does she earn after 3 years?

10. A mountain bike is priced at $450 including GST. Find the price before GST was added.

Challenge

11. A store first raises the price of a jacket by 25%, then later offers 25% off the new price. The jacket started at $160. What is the final price, and what is the overall percentage change from the original?

12. Liam wants to earn $600 in simple interest by investing money at 5% per year for 4 years. How much must he invest?

Answer key (for parents and tutors)

1. Find 10% of $80.
   10% means 10 out of 100, so divide by 10. $80 ÷ 10 = $8.
2. Find 15% of $200.
   15% = 0.15. 0.15 × $200 = $30. (Or 10% is $20 and 5% is $10, so $20 + $10 = $30.)
3. Find 25% of $60.
   25% is a quarter. $60 ÷ 4 = $15.
4. Increase $50 by 20%.
   20% of $50 = 0.20 × $50 = $10. New amount = $50 + $10 = $60. (Or multiply by 1.20: $50 × 1.20 = $60.)
5. Find the GST (15%) on $432.
   GST = 15% of $432 = 0.15 × $432 = $64.80.
6. A skateboard costs $120 before GST. What is the GST-inclusive price?
   Add 15% GST. GST = 0.15 × $120 = $18. Inclusive price = $120 + $18 = $138. (Or $120 × 1.15 = $138.)
7. A shop in Avondale buys a phone case for $80 and marks it up by 35%. Find the selling price.
   Mark-up = 35% of $80 = 0.35 × $80 = $28. Selling price = $80 + $28 = $108. (Or $80 × 1.35 = $108.)
8. A pair of shoes normally priced at $90 is discounted by 20% in a Newmarket sale. What is the sale price?
   Discount = 20% of $90 = 0.20 × $90 = $18. Sale price = $90 − $18 = $72. (Or $90 × 0.80 = $72.)
9. Aroha deposits $2000 in a savings account earning 4% simple interest per year. How much interest does she earn after 3 years?
   Simple interest = Principal × Rate × Time = $2000 × 0.04 × 3. First $2000 × 0.04 = $80 per year. Over 3 years: $80 × 3 = $240.
10. A mountain bike is priced at $450 including GST. Find the price before GST was added.
    The GST-inclusive price is 115% of the original. So original = $450 ÷ 1.15 = $391.30 (rounded to the nearest cent). Check: $391.30 × 1.15 = $450.00.
11. A store first raises the price of a jacket by 25%, then later offers 25% off the new price. The jacket started at $160. What is the final price, and what is the overall percentage change from the original?
    Step 1 (raise 25%): $160 × 1.25 = $200. Step 2 (25% off): $200 × 0.75 = $150. Final price = $150. Overall change: $150 − $160 = −$10, and −$10 ÷ $160 = −0.0625 = a 6.25% decrease. (The two 25% changes do not cancel out because they apply to different amounts.)
12. Liam wants to earn $600 in simple interest by investing money at 5% per year for 4 years. How much must he invest?
    Simple interest = Principal × Rate × Time, so $600 = P × 0.05 × 4 = P × 0.20. Therefore P = $600 ÷ 0.20 = $3000. Check: $3000 × 0.05 × 4 = $600.