

11. Mixed Application — Worksheet C

Name: _____ **Class:** _____ **Date:** _____

Before solving, identify the base at every step.

1. A bike costs \$300. It is marked up 20%, then discounted 15%. Find the final price.

2. A population of 1,000 grows by 12%, then falls by 5%. Find the final population.

3. A jacket is \$96 after 20% off. Find the original price.

4. A student says a 10% increase followed by a 10% decrease returns to the original. Use \$100 to test the claim.

5. A \$100 item is 20% off, then 10% tax is added to the sale price. Find the final price and combined multiplier.

6. A worker earns \$2,400 in sales and receives 5% commission. Find the commission.

7. \$900 earns 3% simple interest per year for 5 years. Find the interest and final amount.

8. A price is increased by 25% and then increased by another 10%. Explain why the total increase is not simply 35% of the original.

9. Create a discount-then-tax problem and solve it.

10. Create a reverse-percent problem and solve it.

11. **What matters and what doesn't:** A \$150 item is sold during a 2-day sale alongside 20 other discounted items. It is 10% off, then 8% tax is added to the sale price. Find the final price. Which details in this problem were not needed to answer it?

12. **Reconstruct the situation:** The expression $80 \times 0.80 \times 0.80$ represents a real multi-step percent situation, with a final result of \$51.20. Write a context for it, and explain what each 0.80 represents.
