



Profit and Loss/Determining Sales Price to Get Seller's "Net"

1. Profit and Loss Math:

- A. When a problem gives "original value" and asks for "present value," you multiply the percentage.
- B. When a problem gives you "present value" and asks for "original value," you divide by the percentage.
- C. If a profit occurs (+) or if a loss occurs (-), treat the value as given in the problem as 100%.

Examples:

- A. A house sold for \$80,000 at a 14% profit. What was the original value?
 $100\% + 14\% = 114\% = 1.14$
 $\$80,000 \div 1.14 = \$70,175.44$ Original Value
- B. A house sold for \$96,600 at a loss of 8%. What was the original value?
 $100\% - 8\% = 92\% = .92$
 $\$96,600.00 \div .92 = \$105,000.00$ Original Value
- C. A house cost \$80,000 four years ago and recently sold at a 9% profit. What was the sale price (present value)?
 $100\% + 9\% = 109\% = 1.09$
 $\$80,000 \times 1.09 = \$87,200$ Present Value
- D. A house cost \$70,000 four years ago and recently sold at a 9% loss. What was sales price (present value)?
 $100\% - 9\% = 91\% = .91$
 $\$70,000 \times .91 = \$63,700$ Present Value

2. Determining minimum sales price to get seller's "net": Many times in setting a listing price, the seller will want to know the minimum sales price in order to "net" them a certain amount after paying commissions and other closing costs.

- A. Parts of the problem: (1) Seller's Net, (2) Closing costs to be paid by the seller, (3) The rate of commission

B. Example: Owner wants to "net" \$80,000 after paying a 7% commission and paying other closing costs of \$300. What must the property sell for?

Step 1: Add the desired net and closing costs
 $\$80,000 + \$300 = \$80,300$

Step 2: $100\% - 7\% \text{ Commission} = 93\% = .93$

Step 3: $\$80,300 \div .93 = \$86,344.09$ Sales price

NOTE: Check your answer:

$\$86,344.09 \times .07 = \$6,044.09$ commission. $\$86,344.09 - \$6,044.09 - \$300 = \$80,000$ Net

3. To calculate Gross Profit: Gross Profit is the difference between the original purchase price and subsequent selling price, not taking into consideration buying costs and selling expense.

Example: You purchased a home for \$65,000 and subsequently sold it for \$100,000. Gross profit is $\$100,000 - \$65,000 = \$35,000$.

4. To calculate percent of Gross Profit: Divide the amount of gross profit by the original value (purchase price).

Example: Using same figures above: $\$35,000$ Gross Profit divided by $\$65,000.00$ Original value = $.538$ or 53.8% Gross Profit.

5. To calculate Net Profit: Net Profit is the difference between the original purchase price plus buying closing costs and subsequent sales price less selling expenses.

Example: You purchased a home for \$65,000 and paid \$1,500 in closing costs. You subsequently sold the home for \$100,000 and paid \$6,500 in a commission and other selling costs. What was your net profit?

Step 1: Determine the Adjusted Purchase Price
 $\$65,000 + \$1,500 = \$66,500$

Step 2: Determine Adjusted Sales Price
 $\$100,000 - \$6,500 = \$93,500$

Step 3: Determine Net Profit
 $\$93,500 - \$66,500 = \$27,000$

6. To Calculate Percentage of Net Profit: Divide the amount of net profit by the adjusted purchase price (original value).

Example: Using same figures above:

$$\$27,000 \div \$66,500 = .406 = 41\% \text{ net profit}$$

CAUTION: Read this type of problem very carefully. A problem may give all data needed to compute net profit, but may ask for gross profit.

7. Practice Problems

- A. An individual needs to net \$60,000 after a sale. If the costs incurred in selling the house include a 6% commission and other expenses total \$1,100, what must the house sell for?
- (a) \$64,766 (b) \$64,693.44 (c) \$65,000 (d) \$65,633.25
- B. A builder sells a new home for \$65,000, netting an 11% profit after deducting the broker's 6.5% commission. What did the house cost to build (to the nearest dollar)?
- (a) \$54,752 (b) \$40,468 (c) \$62,365 (d) \$44,572
- C. Mrs. Smith bought a house for \$45,250 and made improvements on the home totaling \$3,200. What percent profit did she make upon selling the house for \$53,180?
- (a) 25.9% (b) 0.8% (c) 15% (d) 9.76%
- D. Baker sold his home for \$96,350. If his rate of profit was 13%, what was his original cost?
- (a) \$83,235 (b) \$83,750 (c) \$85,000 (d) \$85,265.49
- E. Jim Brown bought a home for \$60,250 and later sold it for \$55,000. What was his percentage of loss?
- (a) 8.7% (b) 9.5% (c) 9.1% (d) 10%
- F. A seller insists upon receiving \$92,300 net for his property, but agrees to pay the broker 6.5% commission. What sales price must be asked to accomplish this?
- (a) \$98,299.50 (b) \$98,716.58 (c) \$96,842 (d) \$97,765

Solutions to Profit And Loss Math:

- A. $\$60,000 \text{ Net} + \$1,100 \text{ Closing Costs} = \$61,100$
 $100\% - 6\% \text{ Commission} = 94\% = .94$
 $\$61,100 \div .94 = \$65,000 \text{ Sales Price (c)}$
- B. $\$65,000 \div 1.11 (100\% + 11\%) = \$58,558.56$
 $\$58,558.56 \times .935 (100\% - 6.5\%) = \$54,752 \text{ (a)}$
- C. $\$45,250 + \$3,200 = \$48,450 \text{ Adjusted Cost}$
 $\$53,180 - \$48,450 = \$4,730 \text{ Profit} \div \$48,450 = .0976 = 9.76\% \text{ (d)}$
- D. $100\% + 13\% = 113\% = 1.13$
 $\$96,350.00 \div 1.13 = \$85,265.49 \text{ (d)}$
- E. $\$60,250 - \$55,000 = \$5,250 \text{ Loss}$
 $\$5,250 \div \$60,250 = .087 = 8.7\% \text{ Loss (a)}$
- F. $100\% - 6.5\% = 93.5\% = .935$
 $\$92,300 \div .935 = \$98,716.58 \text{ Sales Price (b)}$