Percent of Increase

To find the current value or amount, first multiply the original amount by the percent of increase. Then add.

EXAMPLE: The rent for a 1-bedroom apartment was $275 per month. This year the rent went up 4%. How much is the apartment renting for this year?

original amount	$275	original amount	$275
percent of increase	× 0.04	amount of increase	+ 11
amount of increase	$11.00	current rent	$286

The apartment is renting for $286 this year.

Solve.

1. The federal census shows that one of the nation's fastest-growing cities has increased 92% from its previous population of 256,000. What is the new population figure?

   Answer _____

2. Arthur Hodgson is a salesman and works on commission. Last year he sold $245,000 in merchandise. This year he did 20% more business. How much did he sell this year?

   Answer _____

3. Cassy Burleson was making $96.40 a day and was given a 10% increase. How much does she get with the increase?

   Answer _____

4. This year Mr. Ogilvie, a salesman, increased his sales by 20% over last year. He sold $22,500 worth of merchandise last year. How much did he sell this year?

   Answer _____

5. The census for a year ago showed that Podunk had a population of 1,640. This year's census shows an increase of $12\frac{1}{2}$%. What is the population figure for this year?

   Answer _____

6. A farmer averaged 40 bushels of potatoes to the acre on unfertilized ground. This year he has used a fertilizer which is guaranteed to double the production rate. How many bushels to the acre should he raise this year? (Hint: Double means 200 percent.)

   Answer _____

7. Raul Garcia did 250% more business during the past month than he did the month before, when he did $2,650 worth of business. How much did he do last month?

   Answer _____

8. Karen grows tomatoes. This year she produced 300 pounds. She plans to increase production by 20%. How many pounds will she produce after the increase?

   Answer _____

Percent of Decrease

To find the current value or amount, first multiply the original amount by the percent of decrease. Then subtract.

EXAMPLE: Last year's sales figure at Klaus Clothiers was $850,000. This year the total sales figure decreased by 3%. What was this year's sales figure?

original figure	$850,000	original figure	$850,000
percent of decrease	× 0.03	amount of decrease	− 25,500
amount of decrease	$25,500.00	new sales figure	$824,500

This year's sales figure at Klaus Clothiers was $824,500.

Solve the problems which follow.

1. Bernard bought a used car last year for $3,500. It is now worth 25% less (decrease). How much is it worth now?

Answer _____

2. Many stores sell cooked hams. A cook will tell you that a ham shrinks (decreases) while cooking. If a 16-pound ham loses $12\frac{1}{2}\%$ while cooking, how much will it weigh after it is cooked?

Answer _____

3. Strawberries decrease, too, when cooked. If they decrease 15%, how much would remain if you started with 16 quarts?

Answer _____

4. Last month our utility bill was $98. This month shows a decrease of $12\frac{1}{2}\%$. How much is this month's bill?

Answer _____

5. The storekeeper decreased by 20% the price of a coat which had been marked $85. What was the sale price?

Answer _____

6. Last year we had a total rainfall of 9.6 inches. This year there has been a decrease of 25%. How much is this year's fall of rain?

Answer _____

7. The last census shows that the town of Millers has decreased 10% in population. If the previous census figure was 2,400, what is the figure now?

Answer _____

8. Yolanda Gonzales did business last year to the amount of $24,500. This year business has fallen off 15%. To how much will this year's business amount?

Answer _____

Finding the Original Price

If you know the discounted price of an item and the percentage of the discount, you can find the original price by using the fraction or decimal method.

EXAMPLE: A store advertised a radio on sale for $24. This was 25% off the regular price. Find the regular price of the radio.

Original price = 100%

Sale price = $100\% - 25\% = 75\% = 0.75 = \frac{3}{4}$

Fraction Method: Original price = $\$24 \div \frac{3}{4} = \frac{24}{1} \times \frac{4}{3} = \frac{8 \times 4}{1 \times 1} = \frac{32}{1} = \$32$

Decimal Method: Original price = $\$24 \div 0.75 = \$32.00$

Solve.

1. Ms. Franklin bought a car for $10,540. This was 15% off the original price. What was the original price?

   Answer _____

2. Katie bought a blouse for $24. This was 20% off the original price. What was the original price?

   Answer _____

3. Felipa bought a pair of sandals on sale at $33\frac{1}{3}\%$ off. She paid $12 for the shoes. What was the original price?

   Answer _____

4. Mrs. Harper bought a painting for $60, which was 75% of its former price. What was the former price? (Do not subtract the 75% from 100%. Why?)

   Answer _____

5. By paying cash, Mrs. Perkins got a 5% discount on furniture. She paid $950 for the furniture. What would it have cost without the discount?

   Answer _____

6. The school bought books for the library and paid $970 for them, having been given a 3% discount. How much would the books have cost without the discount?

   Answer _____

7. The department store had a 15%-off sale on all merchandise. They took in $8,500 on the first day of the sale. If they had sold the same merchandise at the original price, how much would have been taken in?

   Answer _____

8. The grocer settled some old accounts for 16% less than the original amounts. On this basis she collected $1,680. What was the total of the original accounts?

   Answer _____