

**Percent - Fraction - Decimal Landscape of Problems XVI**  
**Word Problem Types**

*3 Dimensions: Objective, Application, Number Variation*

XVI. In a percent change situation, find the percent change, the amount of change, or the original amount.

		Comes out even	Requires rounding	Percent change less than 1%	Percent change greater than 100%
		Starts at 40 and goes up 3. Find the percent change.	Starts at 41 and goes up 3. Find the percent change.	Starts at 40 and goes up 0.3. Find the percent change.	Starts at 40 and goes up 53. Find the percent change.
Original and amount of change given (find percent change and/or new amount)	Starts at 40 and goes up 3. Find the percent change and/or new amount.	George Washington Elementary School's third grade class had an increase of 12 students from the 2008-2009 school year to the 2009-2010 school year. The total third grade enrollment in '08-'09 was 160 students. What is the percent of change?	Lori wants a new pair of Nike tennis shoes for her birthday. Last year the shoes cost \$120.00 per pair. This year, they are \$20.00 more than last year. What is the percent of change? If necessary, round to the nearest percent.	The pollution level dropped by 12 parts per million from an initial level of 4000 parts per million. What is the percent decrease?	Julie is a dog groomer. Last week, she groomed an average 5 poodles per day. This week, she groomed an average of 12 poodles per day. What is the percent of change? If necessary, round to the nearest percent.
Original and new amounts given (find amount of change and/or percent change)	Starts at 40 and goes up to 43. Find amount of change and/or percent change.	Joseph Jackson scored 80 points on his first Math exam. He then scored a 92 points on his second exam. What is the percent of change?	Marco Shelby became a famous Doctor. He made \$150,000 in 2007. In 2008 he made \$275,000 more than the previous year. What is the percent of increase?	The population of Williamsburg went from 25,400 to 25,430. What is the percent change?	On a History test, a student got 12 questions right. On a second attempt, the student got 37 questions right. What was the percent of increase?
New amount and amount of change given (find original amount and/or percent change)	The original amount was increased by 3 and became 43. Find original amount and/or percent change.	A roller skating rink wants to increase the price of the party package by \$21 to a new total of \$175. What is the percent change? Also find the original price before the increase.	Gwen added 17 movies to her movies collection. She now has a collection totaling 157 movies. What is the percent change?	The price of a share of Silverman mutual fund went up \$0.12 and closed the day at \$60.12. Find the price at the beginning of the day and the percent change.	The Facebook group PFD had an increase of 316 people join the group from September to October. There is now a total of 396 people. What is the percent change?

Percent change and original amount given (find amount of change and/or new amount)	Starts at 60 and goes up 15%. Find amount of change and/or new amount.	John Smith became a great writer. He had a picnic each year to celebrate the date of his first published work. The first year 80 people came. The second year 20% less people attended. How many people came the 2 <sup>nd</sup> year?	A video game retailer used a markup rate of 37%. Find the selling price of a video game that cost the retailer \$20.50?	The average number of customers at McDonalds in 2009 was 62,500 per month. In 2010 it went up .088%. How many customers per month were there in 2010?	Mrs. Jones' fourth grade class has a 125% increase in Hispanic student enrollment this year. Last year, there were 8 Hispanic students in her class. What is the new enrollment number for Hispanic students in the class?
Percent change and new amount given (find original amount and/or amount of change)	An amount is increased to 104. This was a 30% increase. Find original amount and/or amount of change.	Macaws were on a markdown of 20% and the sale price was \$130. What was the original price of the Macaw?	A shirt was decreased in price by 40% to \$17.93. What was the original price of the shirt?	The average water bill dropped 0.75% to an average of \$27.79. What was the average water bill before the change?	Rommy a new and upcoming artist gave a performance and his attendance grew by 120% for his second concert. There was a total of 2,750 people at the concert. How many people attended his first concert?
Percent change and amount of change given (find original and/or new amounts)	An amount went up 40%. This was an increase of 12. Find original and/or new amounts.	Hidden Valley Grade School had a 4 <sup>th</sup> grade enrollment increase of 8%. The 4 <sup>th</sup> grade class went up by 2 students. A) What was the original number of students in the 4 <sup>th</sup> grade class? B) What is the new enrollment in 4 <sup>th</sup> grade?	The Panteen bottle size increased by 6%. This is 2 mL more. What was the original size of the bottle?	The stock price of ACME went down \$0.24 today. This is a 0.6% decrease. Find yesterday's and today's prices.	John has been doing push-ups for two weeks now. He has increased the amount of push-ups her could do by 110%. He can now do 42 push-ups. What was his starting amount?