

Algebra 1 2.7

100

Find the percent of change.

Solve problems involving percent of change

increase

decrease

percent

+ sales tax

- discount

*tax*  
*on sale*

$$\frac{\text{Percent}}{100} = \frac{\text{Change (part)}}{\text{Original (whole)}}$$


Average Retail Prices of Selected Grocery Items		
Grocery Item	Cost in 2000 (\$ per pound)	Cost in 2007 (\$ per pound)
milk (gallon)	2.79	3.87 +39%
turkey (whole)	0.99	1.01 +2%
chicken (whole)	1.08	1.17 +8%
ground beef	1.63	2.23 +37%
apples	0.82	1.12 +37%
iceberg lettuce	0.85	0.95 +12%
peanut butter	1.96	1.88 -4%

% change

+  
+  
+  $\frac{.20}{.85} = \frac{x}{100}$   
+  
+  
+  
-  $\frac{.108}{.96} = \frac{x}{100}$

Source: Statistical Abstract of the United States

Which item had the greatest percent of increase?

44.  **MULTIPLE REPRESENTATIONS** In this problem, you will explore patterns in percentages.

a. **Tabular** Copy and complete the following table.

1% of	500	is 5.	100% of	20	is 20.	25	% of 80 is 20.
2% of	250	is 5.	50% of	40	is 20.	50	% of 40 is 20.
4% of	125	is 5.	25% of	80	is 20.	100	% of 20 is 20.
8% of	62.5	is 5.	12.5% of	160	is 20.	200	% of 10 is 20.
16	31.25	5	6.25	320	20	400	5

b. **Verbal** Describe the patterns in the second and fifth columns.

c. **Analytical** Use the patterns to write the fifth row of the table.

