Algebra 1 2.7

Find the percent of change.
Solve problems involving percent of change

increase
decrease
percent
+ sales tax
− discount

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

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
turkey (whole)	0.99	1.01
chicken (whole)	1.08	1.17
ground beef	1.63	2.23
apples	0.82	1.12
iceberg lettuce	0.85	0.95
peanut butter	1.96	1.88

Source: Statistical Abstract of the United States

% change

+39%

+2%

+8%

$\frac{.10}{.85} = \frac{x}{100}$

+37%

+12%

$\frac{.08}{.96} = \frac{x}{100}$

-4%

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.