Section 3.4

Find Rate \( R = \frac{P}{B} \)

From HS graduation, you got $1250 of money to get set for college. With that money you purchased a laptop for $720. What percent of your money went to the laptop?

\[
\frac{720}{1250} = R = 0.576
\]

57.6%
You invested your $2500 tax return into an account. If in one year you got $135 in interest, what is your rate of return?

\[
\frac{135}{2500} = 0.054
\]

5.4%

You decided to run a 26 mile marathon. As you jog along there is not a lot to think about so you notice the 15 mile marker going by. What percent of the race do you have left?

\[
\frac{15}{26} = 0.5769
\]

57.69%
Last year at your family picnic there were 65 people. This year there were 93 people. What percent increase in attendance did you have?

\[
\frac{93 - 65}{65} = \frac{28}{65} = 0.43 \rightarrow 43\%.
\]

Gas has decreased in value over the last few months from $4.15 a gallon to $1.40. What percent decrease is that?

\[
\frac{4.15 - 1.40}{4.15} = \frac{2.75}{4.15} = 0.6626 \rightarrow 66.3\%.
\]
The total sales for office products this year was $713,340, which is 35% more than last year's sales. What is the amount of last year's sales?

\[
\text{this year } 713,340 \quad P \\
\uparrow 35\% \quad 1.35 \quad - R \\
\text{last yr } ? \quad B \\
\]

\[
B = \frac{P}{R} = \frac{713340}{1.35} = 528400 
\]
The number of scholarships offered a year ago was 10% more than the year before. The number of scholarships offered this year is 1815, which is 10% more than the year before. How many scholarships were offered two years ago?

\[
\frac{1815}{1.1} = 1650
\]

2009 scholarships

\[
\frac{1650}{1.1} = 1500
\]

2008 scholarships

A 40 inch HD LCD television is discounted 25% from the original price. If the discounted price is $1799.99, what was the original price of the television?

\[
B = \frac{P}{R} = \frac{1799.99}{.75} = \$2399.99
\]
Farmland increased in value this year by 4.3% to a state average of $1250 per acre. How much per acre did the land increase in value?

\[
\text{last yr} \quad ? \quad -B \\
\frac{1250}{1.043} = \$1198.47 \\
\frac{1250}{1.043} - B = \$51.53
\]

The Dow dropped 0.56% yesterday to a value of 8300. What was the value at the beginning of the day?

\[
\text{End} \quad 8300 - P \\
\text{Begin} \quad 8346.74 - B
\]

\[
P \cdot 8300 \quad \text{amount dropped} \quad \frac{99.44}{1.0056} \quad \text{amount left}
\]

\[
\frac{P}{P} = \frac{8300}{0.9944}
\]
Increase \( \Rightarrow 100\% + \% \)

Decrease \( \Rightarrow 100\% - \% \)

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Exam on Friday

Mathxl due Friday morning