Percents assignment

*Some of these problems you are specifically asked to do numerically, and for others you are told to use a 100-grid. If there are no specific instructions, you may do the problems in whatever way you prefer, but you should show your work clearly so that a student could follow your solution strategy.*

1. Which of the following are correct, equivalent ways of showing 3.8%

a. 3.8% b.  c. 

d. .38 e. .038 f. .0038

2. What is the simplified fraction form of 3.8% (numerator and denominator must both be whole numbers)?

3. The amount of phosphorous dissolved in the water of a certain lake increased from .020 mg/L to .045 mg/L. By what percent did the phosphorous increase?

4. John bought a car for $17,000.00. After 3 years, the value of the car is now $12,000.00. Find the percents that fill in the blanks:

*Do the problem algebraically/numerically*

a. John's car is worth \_\_\_\_\_\_\_% less than its value when it was new.

b. John's car is worth \_\_\_\_\_\_\_% of its value when it was new.

*Do the problem with a 100-grid*

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5. A. Kara's emporium applied a 30% markup on the wholesale price of bamboo placemats. If the wholesale price of a placemat is $4.00, what price are they being sold for at Kara's?

*Do part A with a 100-grid*

B. Kara's is having a sale on the placemats described in part A, where they are being sold at wholesale prices. What percent decrease is this from the usual retail price?

6. Carl bought a bike. He paid $130 for the bike. The bike was on sale 30% off when he bought it. What is the usual retail price of the bike?

*Do #6 with a 100-grid*

7. The price of gasoline went up by 12% from April to June. If the price in June is $3.50/gal., how much was the price of gasoline in April?