PhyzJob: Gas Gives Me Math

1. One Thursday night some time ago, Mr. Baird purchased 17.755 gallons of gasoline for his Phyzmo truck. The posted price of the gasoline was 4.439 dollars/gallon. The receipt is shown to the right.

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XXXXXXXXXXX0662 DEBIT        6/26/08
BAIRD          /DEAN         10:10PM
AARCO #2166
1055 Watt Ave                SEQ# 620
Sacramento   CA 95825  AUTH# 0204701
---------------------------------------
Pump 07        Gallons  Price  Total$
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Unlead 87      18.203 @ 4.439   81.24
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a. Which of the numbers above—if any—is/are a measurement?

b. Which of the numbers above—if any—is/are an exact value (a value for which there is no uncertainty—like a counting number)?

c. Calculate the actual value of the gasoline purchased using the correct number of significant figures.

d. Mr. Baird paid 24.48 dollars. Did he come out __ahead, __behind, or __even in the deal? Explain.

2. On his previous fill-up, Mr. Baird zeroed the Phyzmo's trip odometer. Since then, he traveled 317.3 miles. The 18.203 gallons completely refilled the gas tank.

a. What is the number of miles Mr. Baird could travel using one gallon of gasoline? Express your answer as a ratio, then evaluate the ratio.

b. What is the number of gallons Mr. Baird would use to travel one mile? Express your answer as a ratio, then evaluate the ratio.

c. What is the value and meaning of 317.3/81.24 in this context?

d. What is the value and meaning of 81.24/317.3 in this context?

e. Write and evaluate a ratio expressing the number of gallons of gasoline that could be purchased for one dollar.

1.c. 81.243 dollars a. 17.43 miles/gallon b. 0.05736 gallon/mile c. Value is 3.906 d. Value is 0.2560 e. 0.2241 gallons/dollar

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