Algebraic Reasoning
Name:_____

Per:_____

POINTS:____

Classwork #33 Quiz

Be sure to include your work when appropriate.

A local department store is having a clearance sale and discounting everything in the store by 25%. The sales tax rate is 8.25%.

1. Write a function f(x) to represent the discounted amount of a purchase, x.

2. Use the function f(x) to complete the table below.

ORIGINAL AMOUNT OF PURCHASE, IN DOLLARS, x	50.00	75.00	100.00	125.00	150.00
DISCOUNTED AMOUNT OF PURCHASE, IN DOLLARS, $f(x)$					

3. Write a function g(x) to represent the amount of sales tax charged on any purchase, x.

4. Use the function g(x) to complete the table below. Round to the nearest cent.

AMOUNT OF PURCHASE, IN DOLLARS, x	37.50	56.25	75.00	93.75	112.50
AMOUNT OF SALES TAX, IN DOLLARS, $g(x)$					

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The Metro Motorcycle Company is having a year-end sale on five models of motorcycles. They are offering a rebate of $2,000 on each motorcycle sold or a 10% discount on each motorcycle sold.

5. Write a function R(x) to represent the cost of a motorcycle, x, after the rebate.

6. Use $R(x)$ to fill in the table of values.

MODEL	A	B	C	D	E
ORIGINAL COST, IN DOLLARS, x	10,000	15,000	20,000	25,000	30,000
COST AFTER REBATE, IN DOLLARS, $R(x)$					

7. Write a function D(x) to represent the cost of a motorcycle, x, after the 10% discount.

8. Use $D(x)$ to fill in the table of values.

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