

Percents

A SPECIAL BIRTHDAY

Write your answers on notebook paper. Show your work.

Aiden's grandparents put \$2,000 in a bank savings account when he was born. The bank account earns simple interest at a rate of 4.8% a year. They told Aiden that he could have the money on his sixteenth birthday. He plans to use the money to buy a used car.

- How much money will be in the account when he turns sixteen?
- Aiden found ads for used cars on the internet. Look at three ads that he found. The ads are from dealers in different states, so the sales tax rates are different.

Option 1	Option 2	Option 3
\$4015 15% off	Originally \$4350 Now \$3915	18% off You Save \$750!
Sales Tax: 5.6%	Sales Tax: 7.25%	Sales Tax: 4.5%

- Which offer has the best discount? Explain.
- Calculate the total cost of each car including sales tax.

On his birthday, Aiden's family and relatives go out to dinner to celebrate. The three families decide to get separate checks.

- Copy and complete each receipt. Show your work.

Aiden's Family

Aunt Elle's Family

Grandma & Grandpa

PASTA HOUSE RECEIPT	
March 12	6:30 PM
.....	
Food Total	\$72.50
Tax (6%)	_____
Subtotal	_____
Tip Amount (15%)	_____
Total Due	_____
<i>Thank you! Please come again!</i>	

PASTA HOUSE RECEIPT	
March 12	6:30 PM
.....	
Food Total	\$49.87
Tax (6%)	_____
Subtotal	_____
Tip Amount (_____ %)	\$10.57
Total Due	_____
<i>Thank you! Please come again!</i>	

PASTA HOUSE RECEIPT	
March 12	6:30 PM
.....	
Food Total	_____
Tax (6%)	\$2.23
Subtotal	_____
Tip Amount (10%)	\$3.94
Total Due	_____
<i>Thank you! Please come again!</i>	

- Explain how each family could have used mental math to estimate the tip.

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	Exemplary	Proficient	Emerging
Math Knowledge #1, 2b, 3, 4	Student accurately determines the amount of money in the account (1), correctly calculates the cost of all three cars (2b), correctly completes all three receipts (3), and provides three logical estimates for tips (4). Student makes no more than one minor error in calculations.	Student completely and correctly solves three of the problems. OR The student solves all the problems using correct methods, but the calculations may contain minor errors.	Student completely and correctly solves at least two of the problems.
Problem Solving #2a	Student accurately determines which of the three offers gives the best discount, providing appropriate supporting calculations (2a).	Student accurately determines two of the three discounts but makes an incorrect conclusion. OR The best discount may be chosen, but the supporting calculations provided are incomplete.	Student is able to determine the best discount without any appropriate supporting calculations. OR Student logically determines the best discount based on incorrect work.
Communication #2a, 4	Student clearly explains his or her reasoning for the discount chosen (2a) and for each of the three mental math strategies used (4).	Student gives explanations for the discount and the three mental math strategies. At most one explanation may be incomplete or unclear.	In providing the explanations for the discount and 3 mental math strategies, at least two of the four must be clear and complete.