

# Tax, Simple Interest, and Debt Word Problems



**Directions:** Solve the word problems from everyday scenarios below rounding to the nearest tenth of a cent. Then, check your answers on page 2.

**1** You purchase a new phone case for \$34.95, a pop socket for \$9.99, and a new phone charger for \$12.99. Sales tax in the area is 8.25%. **What's the total cost of your purchase?**

**2** You put \$150 in a savings account. The account accrues interest at a flat rate of 1.15% per month. **How much is the savings account worth in 18 months?**

**3** You have \$3,000 in credit card debt in an account that charges 14% interest. **How long will it take to pay off the card if you no longer spend on the card and make the minimum monthly payment of \$60?**

# Tax, Simple Interest, and Debt Word Problems



**Directions:** Solve the word problems from everyday scenarios below rounding to the nearest tenth of a cent. Then, check your answers on page 2.

## Answer Key

1. **\$62.71**

**Explanation:**

Calculate sales tax:  $(\$34.95 + \$9.99 + \$12.99) * .0825 = \$4.78$

Calculate the total cost:  $\$4.78 + (\$34.95 + \$9.99 + \$12.99) = \$62.71$

2. **\$181.14**

**Explanation:**

Total value =  $P(1 + rt)$

*P*: period

*rt*: rate

Calculate interest accrued per month:  $\$150 * 0.0115 = \$1.73$

Calculate savings account after 18 months:  $\$150 + (\$1.73 * 18) = \$181.14$

3. **75 months or 6.25 years**

**Explanation:**

Payment =  $[\text{Interest} * \text{Loan Amount}] / [1 - (1 + i)^{-N}]$

$[(0.14/12) * 3000] / [1 - (1 + (0.14/12))^{-12N}] = 75 \text{ months (6.25 years)}$