

Activity: Can You Compute?

Objective: To utilize the *fx-260* calculator to solve consumer application problems, including those involving percent.

Grade Level: Middle School

Topic: Consumer Application Problems/ Computing Percentages

Using the Activity:

This game will allow students to become more familiar with the keystrokes of the calculator while solving consumer application problems. Students will learn how to determine a subtotal, add a sales tax to the subtotal and determine the total cost of items. Students will receive points for their correct solutions as well as the keystroke sequence they use to determine their answers.

Procedure: Students will be seated in groups of four. A set of cards will be distributed to each group. The cards are shuffled and placed facedown in the middle of the table. A student is selected to begin the game. The student takes the top card from the deck and is responsible for determining the answer to the question and the keystrokes used on the *fx-260* calculator to solve the problem. The student will be awarded a point for the correct answer, and another point for the correct keystroke sequence. A student will also be awarded two points for sharing aloud the solution and keystroke sequence with their group of four students. Students will record their keystroke sequences and solutions on paper as they play. If the other group members disagree with the solution or keystroke sequence presented by another student, they may challenge the results and may share their own strategy for solving and the answer they believe is correct. Points can be awarded to these students for their strategies and keystroke sequences only if they differ from the original solutions shared and all four students agree the answers and keystroke sequences are more reasonable than the first solution shared. Play continues with the next player. Play continues until all cards are answered or the teacher calls time. Points are totaled for each player and the winner is the player with the highest number of points.

Extension: Ask students to generate new cards to add to the deck.

CAN YOU COMPUTE PROBLEMS 1 – WITH NO ANSWERS

Mr. Jones budgeted \$180.00 for his family of four to visit King's Dominion for the day. He spent \$29.95 per ticket for admission, and \$42.79 for food. Did Mr. Jones spend more or less than he budgeted? How much more or less?

Shawn has \$403.24 in his bank account. He wrote a check for \$74.53. How much money does he have left in his bank account?

Mr. Adkins bought a shirt that cost \$42.76 including tax. He paid the clerk with a \$100.00 bill. How much change he should receive?

Jehovanni had \$49.00. She spent \$13.89 on lunch and \$13.25 for a school projects. If sales tax is 7% and it hasn't been added to these totals, how much money does she has left?

Samantha exercises by running about the same amount of time each day. Yesterday Samantha's stopwatch showed that she ran for 20.6 minutes. About how many minutes will Samantha run in 5 days?

Thomas went to the store to purchase 8 two-liter bottles of soda for a party. Each two-liter bottle costs \$1.39. Sales tax is 5%. How much money does Thomas needs to take to the store?

Allison spends an average of \$32.75 each week on dry cleaning. About how much will Allison spend on dry cleaning for the year?

Sal bought gifts for his friends that cost \$15. 25, \$14.38, \$ 17.53, and \$16. 76. If these prices do not include the 7% sales tax, how much will Sal actually spend?

A dog trainer is building an enclosure for exercising his dogs. The enclosure will be 24.7 feet long and 18.4 feet wide. How much area will the dog trainer need for his enclosure?

Tabitha bought a table for \$99.68 and a set of chairs for \$398.53. If tax is another 7%, how much did the table and chairs cost?

CAN YOU COMPUTE PROBLEMS 1 – WITH ANSWERS

Mr. Jones budgeted \$180.00 for his family of four to visit King's Dominion for the day. He spent \$29.95 per ticket for admission, and \$42.79 for food. Did Mr. Jones spend more or less than he budgeted? How much more or less?

$29.95 \times 4 = 119.80 + 42.79 = 162.59 - 180.00 = +17.41$
He spent less, and has \$17.41 left in his budget.

Shawn has \$403.24 in his bank account. He wrote a check for \$74.53. How much money does he have left in his bank account?

$403.24 - 74.53 = \$328.71$

Mr. Adkins bought a shirt that cost \$42.76 including tax. He paid the clerk with a \$100.00 bill. How much change he should receive?

$100.00 - 42.76 = \$57.24$

Jehovanni had \$49.00. She spent \$13.89 on lunch and \$13.25 for a school projects. If sales tax is 7% and it hasn't been added to these totals, how much money does she has left?

$13.89 + 13.25 = 27.14 \times 7\% = 1.90 = 29.04 - 49.00 = +\19.96

Samantha exercises by running about the same amount of time each day. Yesterday Samantha's stopwatch showed that she ran for 20.6 minutes. About how many minutes will Samantha run in 5 days?

$20.6 \times 5 = \text{about } 103 \text{ minutes}$

Thomas went to the store to purchase 8 two-liter bottles of soda for a party. Each two-liter bottle costs \$1.39. Sales tax is 5%. How much money does Thomas needs to take to the store?

$8 \times 1.39 = 11.72 \times 5\% = \11.68

Allison spends an average of \$32.75 each week on dry cleaning. About how much will Allison spend on dry cleaning for the year?

$32.75 \times 52 = \text{about } \1703.00

Sal bought gifts for his friends that cost \$15.25, \$14.38, \$17.53, and \$16.76. If these prices do not include the 7% sales tax, how much will Sal actually spend?

$15.25 + 14.38 + 17.53 + 16.76 = 63.92 \times 7\% = 4.47 = \68.39

A dog trainer is building an enclosure for exercising his dogs. The enclosure will be 24.7 feet long and 18.4 feet wide. How much area will the dog trainer need for his enclosure?

$24.7 \times 18.4 =$ at least 454.48 sq ft (454.48 sq ft will equal the enclosure)

Tabitha bought a table for \$99.68 and a set of chairs for \$398.53. If tax is another 7%, how much did the table and chairs cost?

$99.68 + 398.53 = 498.21 \times 7\% = 34.87 = \533.08

CAN YOU COMPUTE PROBLEMS 2 – WITH NO ANSWERS

The average donation of each 8th grader for the 8th grade gift was \$4.12. There are 397 students in the 8th grade. What is the total donation the 8th graders contributed for the class gift?

What percent of 80 is 16?

Jon bought 5 tires that sold for \$98.50 each. How much did the tires cost if tax is 7% and the installation cost is \$4.50 per tire for mounting and balancing? (The fifth tire is mounted as his spare.)

What percent of 75 is 70?

The cost of four concert tickets is \$364.00, without tax. If tax is 5%, and there is a handling charge of \$10.00 per ticket by the ticket company, how much is the total cost?

$$25 \% \text{ of } X = 20$$
$$X =$$

What number is 40% of 70?

$$30\% \text{ of } Z = 45$$
$$Z =$$

What number makes this number sentence true?

$$50\% \text{ of } 225 =$$

$$25\% \text{ of } L = 65$$

$$L =$$

The average donation of each 8th grader for the 8th grade gift was \$4.12. There are 397 students in the 8th grade. What is the total donation the 8th graders contributed for the class gift?

$$4.12 \times 397 = \$1635.64$$

Jon bought 5 tires that sold for \$98.50 each. How much did the tires cost if tax is 7% and the installation cost is \$4.50 per tire for mounting and balancing? (The fifth tire is mounted as his spare.)

$$5 \times 98.50 = 492.50$$
$$492.50 \times 7\% = 34.48$$
$$492.50 + 34.48 = 526.98$$
$$526.98 + 22.50 = 549.48$$

The cost of four concert tickets is \$364.00, without tax. If tax is 5%, and there is a handling charge of \$10.00 per ticket by the ticket company, how much is the total cost?

$$364.00 \times 5\% = 18.20$$
$$364.00 + 18.20 = 382.20$$
$$382.20 + 40.00 = 422.20$$

What number is 40% of 70?

$$28$$

What number makes this number sentence true?

$$50\% \text{ of } 225 =$$

$$112.5$$

What percent of 80 is 16?

$$20\%$$

What percent of 75 is 70?

$$93\%$$

$$25\% \text{ of } X = 20$$
$$X = 8$$

$$30\% \text{ of } Z = 45$$
$$Z = 150$$

$$25\% \text{ of } L = 65$$
$$L = 260$$

