




Concept: Percent in Business

Name: _____


COMPUTER COMPONENT

Instructions: Select the computer program *Understanding Percent* (Neufeld)
 Follow the instructions to the Main Menu.
 Select *Percent in Business* from the Main Menu.



Work through all sections of this topic **in order**:

- *In This Topic*
- *Sales Tax*
- *Discount*
- *Commission*
- *Simple Interest*
- *Compound Interest*
- *Practice Questions*



As you work through the computer exercises, make your notes in the **NOTES** section of this page.

When you reach the end of the section *Practice Questions* on the computer, move on to the **OFF COMPUTER EXERCISES** below.

NOTES:

Fill in the blanks for the following formulas.

Simple Interest:

Amount = _____ + _____

Interest = _____ × _____ × _____

When you receive interest on interest, we say that the interest is _____.

The AMOUNT at the end of one year becomes the new _____ for the next year.



Compound Interest:

Amount - _____ **(1+ _____)**year

OFF COMPUTER EXERCISES

Solve the following:

1. Gabby buys herself a new jean jacket priced at \$59.99. Sales tax in her region is 15%. *How much will she have to pay in total for the jacket?*

2. Clare and Roy's restaurant bill comes to \$45.35.

(a) Calculate the amount of tax they would pay at 11%.

(b) Calculate the tip. The service was good so they plan to tip 15% of the cost of the meal. (*Cost of the meal does not include the tax.*)

(c) How much will Clare and Roy paying in total for their meal?



3. Theo bought a new pair of shoes. The sales tax of his purchase was \$4.80. In his region, the sales tax is 15%. *How much were the shoes that he bought?*

4. A new resort has opened up just on the outskirts of the city with a water park entertainment center. They have posted 4 different rates. The rates are listed in the chart below.

Jackson's Hotel Room Packages			
A	B	C	D
Daily Rate	2-Day Package	3-Day Package	7-day Package
\$136 plus 15% tax	\$264 plus 15% tax	\$439 (tax included)	\$1150 (tax included)

Deb her friends, are planning to take a 7 day vacation at the resort. *What is the least expensive way for their friend to stay for 7 days?*

5. Normally, movie tickets sell for \$8.00 each. The movie theater is having a sale! If you buy 4 or more tickets, you get \$1.00 off each ticket. *What percent discount is this?*

6. A car salesperson earns 2.8% commission of every sale that she makes. If the salesperson sold a car for \$21 000, *how much would she earn from that sale?*

7. Pedro works at a computer store. He earns a 4 % commission on all his sales. *What amount must he sell for his commission to be \$200?*



- (a) His boss offered him an opportunity to earn a flat rate per week of \$300 dollars with a lower commission. Normally he earns \$500 a week. Assuming he sells the same amount each week, *what rate would his commission have to be to maintain his weekly salary of \$500?*
8. Colin has \$1500 in a bank account. The account pays Simple Interest of 1.5% per year. *How much money will Colin have after 4 years?*
9. Carla has \$1500 in an investment. Her investment pays 1.5% Compound Interest per year. *How much money will Carla have in total after 4 years?*

10. A credit card company charges 17% Simple Interest per month on all overdue accounts. Patrick has a balance of \$250 on his credit card.

(a) Assume that Patrick pays his credit card bill after 6 months have passed. *How much will he owe then?*

(b) Assume that Patrick pays his credit card bill after 12 months have passed. *How much will he owe then?*

11. Charlie invests \$1000 for 5 years. The investment is a Compound Interest investment with the interest rate of 8% per year.

(a) *How much money will Charlie have at the end of the 5 years?*

(b) *How much interest has Charlie earned over the 5 years?*

12. Leslie's favorite sports store is having a sale, but Leslie can only afford to buy one item. She has narrowed her choices down to three items:

Item	Original Price	Discount
Squash Racket	\$29.99	5%
Tennis Shoes	\$58.99	40%
Skateboard	\$89.99	60%

(a) *Calculate the discounted price for all three items.*

(b) *Which is the most inexpensive item on the list after the discount?*

(c) *How much would the most expensive item cost if the cashier offered Leslie an additional 8% off the already discounted price?*

Challenge:

13. Last year, an Energy company reported a profit of \$15,000 on natural gas sales of \$1,000,000. This year they made a profit of \$30,000 on natural gas sales of \$1,000,000. When talking to their employees, they claim that their profit increased only by 3%. Employees were enraged and insisted that their profits increased by 100%.

(a) *How did the company and the employees calculate these increases?*

(b) *Which increase do you think is correct? Why?*



12. To solve problems involving percent, it is important to be able to recognize what quantity is the whole (100%). The whole (100%) is the quantity to which the other things in the problem are being compared. Complete the following mind map with as many phrases that can be used to signal 100%. (*You may choose to have students complete this on their own, in pairs, or in groups*)

