

GED Math Worksheet: Percent Problems

Instructions: Solve the following word problems using the percent formula and your calculator! Remember the Percent formula: $\text{Base} \times \text{Rate} (\%) = \text{Part}$; and $\text{Part}/\text{Base} = \text{Rate} (\%)$

***** Check your answers when you're finished.

1. A store is having a 25% off sale on a jacket that originally costs \$80. What is the sale price of the jacket?
(Hint - You can either use $\text{Base} \times \text{Rate} = \text{Part}$ and subtract that from \$80, or you can make it easier and multiple \$80 by 75% (this is the percentage of the total cost you're paying.))
2. A student scored 72 out of 90 on a test. What percent did the student score?
3. A company **increased the price** of a product from \$50 to \$65. What is the percent increase? (Hint - \$50 is the base and the part is the difference between 65 and 50)
4. A population of a small town decreased from 12,000 to 9,600 people. What is the percent decrease? (Hint – use problem #3 Hint to figure this out.)
5. A meal at a restaurant costs \$45 before tax and tip. If the sales tax is 8% and the tip is 15%, what is the total cost of the meal? (Hint – you don't need to find the totals for the tax and tip separately: you can add them together for the final rate. And don't forget that after you figure out the Part, add it back to the base for the total cost of the meal.)
6. A TV originally costs \$1,200 but is on sale for \$900. What is the discount percentage?
7. A person invested \$1,500 in a savings account that earns 4.5% interest per year. How much interest will the person earn in one year?
8. A sweater that originally costs \$60 is marked up by 20%. What is the new price of the sweater? (Hint – once you find out what the part is make sure to subtract it from the base.)
9. A store bought shoes for \$40 per pair and sold them for \$60 per pair. What is the percentage markup? (Hint – 40 is the base.)

CHALLENGE QUESTION - 10. A school had 500 students last year. This year, it has 550 students. What is the percent increase in students?

Answer Key:

1. Sale price = $\$80 - (25\% \text{ of } \$80) = \$80 - \$20 = \mathbf{\$60}$

Or try $\$80 \times 75\%$it's \$60 ----- the goal is to make this easier, not harder

2. Percent score = $(72/90) \times \mathbf{100} = \mathbf{80\%}$ ----- If you use the 2nd function and % key on the TI-30 calculator, you don't need to multiply 100.

3. Percent increase = $[(65 - 50) / 50] \times \mathbf{100} = \mathbf{30\%}$

4. Percent decrease = $[(12,000 - 9,600) / 12,000] \times \mathbf{100} = \mathbf{20\%}$

5. Total cost = $(23\% \times \$45) + \$45 = \mathbf{\$55.35}$

6. Discount percentage = $[(1,200 - 900) / 1,200] \times \mathbf{100} = \mathbf{25\%}$

7. Interest = $(4.5\% \times \$1,500) = \mathbf{\$67.50}$

8. New price = $\$60 + (20\% \times \$60) = \$60 + \$12 = \mathbf{\$72}$

9. Percentage markup = $[(60 - 40) / 40] \times \mathbf{100} = \mathbf{50\%}$

10. Percent increase = $[(550 - 500) / 500] \times \mathbf{100} = \mathbf{10\%}$