**PERCENTS**

Percent - is the number of parts per 100; the numerator of a fraction with a denominator of 100.

Write the following as fractions (in lowest terms)

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| --- | --- | --- |
| Example 1:  13% | Example 2:  24% | Example 3:  125% |

Write each percent as a decimal

|  |  |  |
| --- | --- | --- |
| Example 4:  20% | Example 5:  2% | Example 6:  134% |

**PERCENT PROBLEMS**

‘of’ in math means to multiply

‘out of’ in math means to divide

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| --- | --- |
| Example 7:  There were 25 apples. Molly took 20% of the apples home. How many apples did Molly take? | Example 8:  Stephen spent 40% of his birthday money. He was given $145. How much does he have left? |
| Example 9:  Nadiya achieved 45 out of 60 on her math test. What is this as a percent? | Example 10  An outfit is $34.95 and is on sale for 25% off. Taxes on this item are 13%. Calculate the total cost to purchase this item. |

**Practice: Percent**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Write each percent as a decimal | | | | | | | |
| a. 45% | b. 67% | c. 6% | d. 1% | e. 100% | f. 150% | g. 9.5% | h. 0.5% |
| 2. Write each decimal as a percent | | | | | | | |
| a. 0.23 | b. 0.56 | c. 0.79 | d. 0.05 | e. 0.235 | f. 1.2 | g. 0.006 | h. 0.01 |
| 3. Write each fraction as a percent (to 1d.p) | | | | | | | |
| a. | b. | c. | d. | e. | f. | g. | h. |
| 4. Evaluate: | | | | | | | |
| a. 20 % of 250 | | b. 5% of $7.90 | | c. 8% of $400 | | d. 13% of 50 000 | |
| 5. Express as a percent | | | | | | | |
| a. 6 out of 10 | | b. 37 out of 50 | | c. 15 out of 60 | | d. 8 out of 80 | |
| 6. Sonia has a picture that is 60cm long. She asked the photo shop to reduce the length by 30%. What will the new length be? | | | | 7. Yangyang got 64 hits in 91 times at bat. What percent of the time did she get a hit? (round to 1d.p.) | | | |
| 8. A calculator has a price of $260. The retailer first discounts 10% and then adds sales tax on 9%. Can we just do one calculation and discount 1%? Explain and show mathematical solution. | | | | 9. A dealer bought a used car for $6000. He marked the price up by 50% from what he paid for it. When he couldn’t sell the car at this price, he marked it down by 40%. The car was bought. Did he make or lose money? How much? | | | |
| Answers: 1)0.45; 0.67; 0.06; 0.01; 1.0; 1.5; 0.095; 0.005; 2) 23%; 56%; 79%; 5%; 23.5%; 120%; 0.6%; 1% 3) 20%; 46%; 75%; 44.4%; 80%; 33.3%; 266.7%; 37.5% 4) 50; $0.40; $32; 6500  5) 60%; 74%; 25%; 10% 6) 42cm long, 7) 70.3%  8) [1%disc=$257.40] [10%dis+9%tax=$255.06] They are not the same. You must do separately. 9)Loss of $600 | | | | | | | |