## Lesson: 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)

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

Write each percent as a decimal

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

## Percent Problems

'of' in math means to multiply
'out of' in math means to divide

## Example 7:

There were 25 apples. Molly took $20 \%$ of the apples home. How many apples did Molly take?

## Example 9:

Nadiya achieved 45 out of 60 on her math test. What is this as a percent?

Example 8:
Stephen spent $40 \%$ of his birthday money. He was given $\$ 145$. How much does he have left?

## 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

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 60 cm long. She asked the photo shop to reduce the length by $30 \%$. What will the new length be?
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.
7. Yangyang got 64 hits in 91 times at bat. What percent of the time did she get a hit? (round to ld.p.)
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; $0.01 ; 1.0 ; 1.5 ; 0.095 ; 0.005 ; 22) 23 \% ; 56 \% ; 79 \% ; 5 \% ; 23.5 \% ; 120 \% ; 0.6 \% ; 1 \%$
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) 42 cm long, 7 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

