## Solving Percent Problems

## Directions:



Step 1: Draw and label a picture (box method) to represent each scenario.
Step 2: Record the proportion you see in your box method that you could use to solve for $x$ (don't solve). Do this for all problems.
Step 3: Go back to each problem and estimate the value of $x$; record your methods for estimating.
Step 4: Go back to each problem and SOLVE the proportion you wrote. Make sure this answer makes sense compared with the estimate.

1. A baseball pitcher won $80 \%$ of the games he pitched. If he pitched 35 ballgames, how many games did he win?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

2. Jerry, an electrician, worked 7 months out of the year. What percent of the year did he work?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

3. A metal bar weighs 8.15 ounces. $93 \%$ of the bar is silver. How many ounces of silver are in the bar? (Round to the nearest thousandth)

| Step 1: | Step 2: |
| :--- | :--- |


| Step 3: | Step 4: |
| :--- | :--- |

4. A woman put $\$ 580$ into a savings account for one year. The rate of interest on the account was $61 / 2 \%$. How much was the interest for the year in dollars and cents? (Round to the nearest cent)

| Step 1: | Step 2: |
| :--- | :--- |
|  |  |
| Step 3: | Step 4: |

5. A student answered 86 problems on a test correctly and received a grade $98 \%$. How many problems were on the test, if all the problems were worth the same number of points?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

6. Manuel found a wrecked Trans-Am that he could fix. He bought the car for $65 \%$ of the original price of $\$ 7200$. What did he pay for the car? (Round to nearest dollar)

| Step 1: | Step 2: |
| :--- | :--- |
|  |  |
| Step 3: | Step 4: |

7. Pamela bought an electric drill at $85 \%$ of the regular price.

She paid $\$ 32.89$ for the drill. What was the regular price?
(Round to the nearest cent)

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

8. Ben earns $\$ 12,800$ a year. About $15 \%$ is taken out for taxes.

How much is taken out for taxes?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

9. At a sale, shirts were sold for $\$ 15$ each. This price was $80 \%$ of their original price. What was the original price?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

10. A $\$ 150$ snowboard is marked up $30 \%$. What is the new price?


| Step 3: | Step 4: |
| :--- | :--- |

11. A pair of jeans cost $\$ 40$ last year. This year they cost $\$ 48$. What was the percent of increase?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

12. On a math exam, there were 25 questions. There were 2 extra credit problems as well. If a student got all 27 questions correct and the test was scored out of a total of 25 , what percent would the student receive?

| Step 1: | Step 2: |
| :--- | :--- |
| Step 3: | Step 4: |

