Lesson 33- Percent of a Number

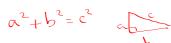**How to find the percent of a number:**

x

1) Set up a Proportion   OR   2) Switch the percent to a ___decimal___

1) Proportion:

   Step 1:   Set up the proportion

   Step 2:   Cross multiply & divide.

$a^2 + b^2 = c^2$

Example: You got 65% on a test and your teacher is counting that for 25 marks.

$$\frac{65}{100} = \frac{?}{25} = \underline{25 \times 65 \div 100} = 16.25$$

2) Percent to Decimal:

Step 1:   ___divide___ the ___percent___ by 100

Step 2:   ___multiply___ the decimal with the number

65% of 25
0.65 × 25 = 16.25

   Ex: 20% discount on $100.00

   $20 \div 100 = 0.2$

   $0.2 \times 100 = \$20$

Examples:

   1. What is 40% of 180 smarties?

   $40\% = 0.4$

   $0.4 \times 180 = 72$ smarties

   $\frac{40}{100} \diagup \frac{x}{180}$

   $x = 180 \cdot 40 \div 100 = 72$

   2. 2% of 123?

   $2\% \neq 0.2$ $0.02 \cdot 123 = 2.46$

   3. 75% of 100? $0.75 \cdot 100 = 75$

   4. 15% of $50.55? $0.15 \cdot 50.55 = \$7.58$

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Percent of a Number-Word Problems:

5. Joe received 75% on his last math test. What did he get out of 25 points?

$0.75 \cdot 25 = 18.75$ points

6. 80% of the seats at the Bell Center were sold. The total number of seats at the Bell Center is 60 000. How many seats were sold?

$0.8 \times 60\,000 = 48000$ Seats

7. The school's population is 1800. 25% of the students attended the dance. How many students went to the dance?

$0.25 \cdot 1800 = 450$ students

How many students did NOT go to the dance? $1800 - 450 = 1350$