Percent Proportion

The percent proportion is often used to solve per cent problems. Some useful vocabulary can be found below.

Percent Proportion:
$$\frac{percent}{100} = \frac{part}{total}$$

Word	Mathematical Symbol
of	Any multiplication symbol: x or ( ) or •
is	=
what	Any letter; for example n
find	n =

Translate into a proportion:

What percent of 5000 is 3.8?
   rate   *total* *part*
$$\frac{n}{100} = \frac{3.8}{5000}$$

What is 5% of 19?
part   *rate*   *total*
$$\frac{5}{100} = \frac{n}{19}$$

90% of what is 342?
rate   *total* *part*
$$\frac{90}{100} = \frac{342}{n}$$

Solve the following problems using the percent proportion.

1.   24% of 300 is what?

2.   Find 320% of 60.

3.   45 is 60% of what?

4.   3000 is 0.5% of what?

5.   What percent of 140 is 3.5?

6.   What percent of $4000 is $64?

7.   How much tax will Colleen pay on a surround-sound system that costs $1885.00 if the tax is 5%?

8.   Renata now earns $9.50 per hour. This is 125% of what she earned last year. What did she earn per hour last year?

9.   The Incredible Chocolate Chip Company has discovered that 36 out of 400 chocolate chip cookies do not contain enough chocolate chips. What percent of the chocolate chip cookies do not have enough chips?

10.   In a survey taken by the Department of Agriculture of 450 people, 74% admitted that they hated brussels sprouts. How many people in this survey did not care for this vegetable?

11.   Peter and Judy together earn $5060 per month. Their mortgage payment is $1265 pr month. What percentage of their household income goes toward paying the mortgage?

12.   Shannon paid $8400 in federal and state income taxes as a lab technician, which amounted to 28% of her annual income. What was her income last year?