

Check Your Answers on Percents (Part 2)!

1) No! It is not possible to have a likelihood or probability greater than 100%. If the likelihood is 100%, it guarantees that event will definitely happen. Therefore the forecast should have been no more than 100%, and only 100% if it *is raining*!

2) 80% If 80 cents (\$0.80) out of every dollar is spent on feeding the homeless, then 80% is the predicted amount of the donations to be spent on this charitable deed. Because percent is the number of parts per hundred, 80 cents out of 100 cents (1 dollar) is 80%.

3) No! If half of the community residents turned out to vote, then 50% was the voter turn-out for this election which does not meet the typical turn-out of 67%.

4) 98.7% ($0.987 = .98,7\%$) Changing a decimal to a percent involves moving the decimal point two place values to the right (the hundredths place) because percent is the number of parts per hundred.

5) 130% ($1.3 = 1,30\%$) Again, to convert a decimal to a percent, move the decimal point two place values to the right (the hundredths place). Add zeros as necessary to hold the place value before the decimal point.

6) 0.42% ($0.0042 = .00,42\%$ or 0.42%) Again move the decimal point two place values to the right which does not necessarily produce digits before the decimal point. Note that two zeros before the decimal point are unnecessary.

7) 63% ($\frac{63}{100} = 63$ parts per hundred = 63%) This fraction would be read as sixty-three hundredths. Because percent is the number of parts per hundred, it is possible to convert directly to a percentage.

8) 12% ($\frac{3}{25} \cdot \frac{4}{4} = \frac{12}{100} = 12\%$) It is always possible to convert a fraction to a decimal and then change the decimal to a percent by moving the decimal point two place values to the right. In this case, it may be faster to produce a fraction equivalent to the given fraction with a denominator of 100 in order to convert to a percent.

“twelve hundredths”

9) 62.5% ($\frac{5}{8} = 5 \div 8 = 0.625 = 0,62,5\%$) To convert this fraction to a percent, divide the numerator by the denominator to produce a decimal which can then be converted to a percentage by moving the decimal point two place values to the right. The long division without a calculator is shown to the right.

$$\begin{array}{r} 0.625 \\ 8 \overline{) 5.000} \\ \underline{-48} \\ 20 \\ \underline{-16} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

10) 450% There are several possible methods to convert this mixed number to a percent including changing $4\frac{1}{2}$ to an improper fraction ($\frac{9}{2}$), then to a decimal 4.5, and finally to a percent: $4.5 = 4,50\%$

However this may be a great opportunity to use your reasoning skills and knowledge of percents! Recall that the number 1 is 100% which means that the number 4 is 400%.

One-half is 50% (or 0.5 which is 0,50,%). Therefore $4\frac{1}{2} = 450\%$! (This could be a *percent change*!) Coming soon!