Rounding and percents **NAME:**

This worksheet is designed to remind you how we round numbers and find percents.

Rounding: Problems will often request you round your answer to one or two decimal places. Rounding to "two decimal places" means you round the number so that there are two numbers to the right of the decimal point. For instance, the number 4.567321 is rounded as 4.57. You may remember that we change the 6 in the hundredths place to a 7 because the number directly to its right is 5 or more. We would leave it as a 6 if the number directly to its right was 4 or less. Round the following numbers to the specified number of decimal places.

a.) 14.57842 (three decimal places)

b.) 2.54768 (two decimal places)

c.) -3.65872465 (one decimal place)

d.) 14.78543 (two decimal places)

e.) 3.39921 (two decimal places)

Percents:
Say we asked 500 women if they brushed their teeth this morning, and 220 said yes. We are often interested in the percent who said yes, and not the actual number. We can divide the two numbers (220 / 500) and get .44 (not rounded). Often when we divide two numbers, we want the equivalent percentage instead of the decimal answer. Recall that we move the decimal place over two places to the right to turn this into a percent, or 44%.

Understanding: To understand percents, it helps to look at the word "per cent"; it means "per 100". So 44% would mean that for every 100 people, 44 fall into a certain category. In our case, 44 women out of every group of 100 said they did brush their teeth. Check this out. In our example, there were 500 women and 220 said yes. Notice 44 + 44 + 44 + 44 + 44 (five groups of 44) makes up the 220. Or for every group of 100, 44 women said they brushed their teeth. So essentially all percents do is reduce our information from "so many out of 500" to "so many out of 100". Using percents allows us to compare studies like this one and another that may ask a different number of people.

I want to emphasize that percents describe the number of parts we want for every 100 parts. For the following percentages, shade the portion of the picture that the percentage represents. Each picture has 100 equal parts.

a.) 40%

b.) 57%

c.) 5%

d.) 34.5%

Usually where percents are figured, we will round our answers to three decimal places, and then convert it to percent form. So for instance, we divide 85 by 146 and get .5821918. We round this to .582 and write it as 58.2%. Notice this gives us a percent rounded to one decimal place.

For the following numbers, round appropriately and convert to percent form.
a.) .72649065

b.) .25672957

c.) 2.346723

d.) 3.198734