Place Value Skills
Rounding Numbers

Another skill we use when we understand place value is **rounding**. Rounding is used to make complex numbers easier to use. Rounding is a great way to check answers!

Vocabulary	
Rounding	Approximating a number to its nearest benchmark number.
Benchmark Numbers	An easily countable number that can be used for rounding. 10's, 100's, 1,000's.
Midpoints	The number in the middle of two benchmark numbers. Always has a 5.
Approximate	To find a value that is close to the exact value.

Rounding

There are many strategies available for you to use when rounding a number. Regardless of the strategy you choose you **must** pay attention to what value you are rounding to.

Rounding with a Number Line

1. Draw a blank number line.
2. Figure out what place you are rounding to.
3. Determine the benchmark numbers.
4. Find the midpoint.
5. Plot your given number.

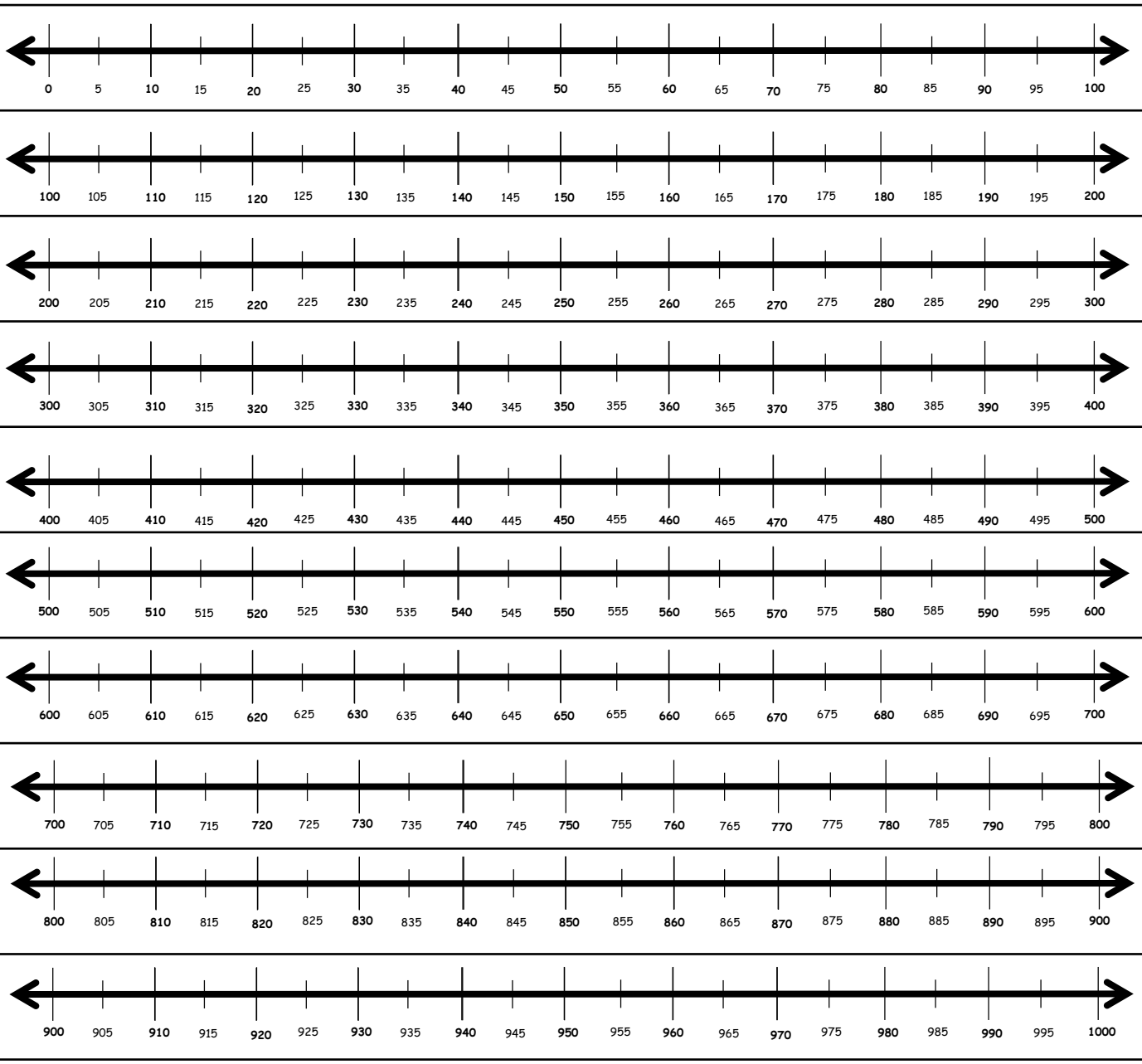
Rounding Notes

Why do we round?	
What are benchmark numbers?	
What are midpoints?	
Rounding to the nearest 10	
Rounding to the nearest 100	

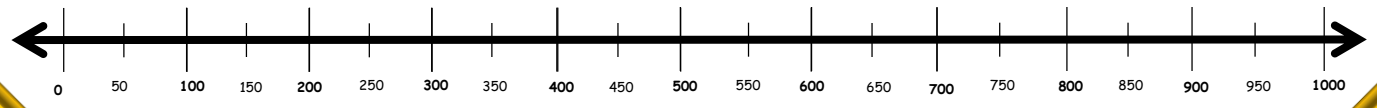
Rounding Tools

The best tools to utilize for rounding are number lines and hundreds charts. Check out some of the references below to help you out until you have the skills mastered.

Figure out where your number will fall on the number line and round to the nearest 10. The benchmark numbers are bolded.



Use the bottom number line to help you round to the nearest 100's. If the number is larger than 1000 try to use it as a frame of reference.



Rounding For Reasonability

Rounding as a very important use. When we add and subtract we sometimes make small mistakes. Rounding the problem's numbers to their nearest 10 or 100 can help you determine if your exact answer is reasonable or not.

Vocabulary	
Reasonability	Determine if an answer is correct by estimating with rounded numbers.
Estimate	To slightly change a number into an easier to use number. Typically by rounding.
Rounding	To approximate a number to its nearest benchmark number.

What is Reasonability?

Consider the following addition problem.

$$\begin{array}{r} 495 \\ +357 \\ \hline 852 \end{array}$$

Would you say it is close to this one?.

$$\begin{array}{r} 500 \\ +360 \\ \hline 860 \end{array}$$

When you round the numbers of a problem you can create a much easier problem. This will allow you to check your work. What do you notice about the problems above?

Use rounding to determine if these answers are reasonable

$\begin{array}{r} 237 \\ +746 \\ \hline 983 \end{array}$		Reasonable?
$\begin{array}{r} 337 \\ +396 \\ \hline 633 \end{array}$		Reasonable?
$\begin{array}{r} 637 \\ -298 \\ \hline 339 \end{array}$		Reasonable?
$\begin{array}{r} 401 \\ -194 \\ \hline 393 \end{array}$		Reasonable?