

Poole Elementary 4th Grade Math Homework Helper

Unit 1- MCC4.NBT.3

MCC4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.

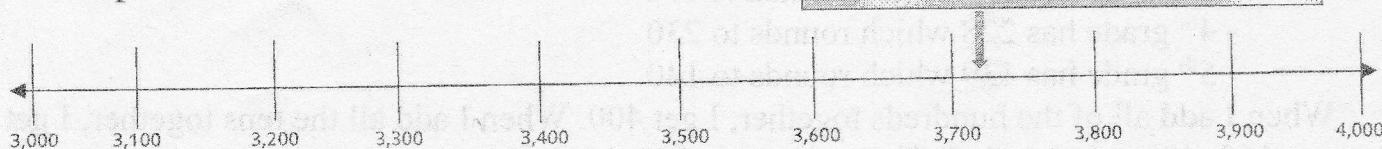
In other words... I can “round” or estimate any multi-digit number by finding the nearest ten (10, 20, 30, 40, etc.); the nearest hundred (100, 200, 300, etc.); nearest thousand (1000, 2000, 3000, 4000, etc.) and so on a number is closest to.

371 is closest to 400 9,259 is closest to 9000 14,802 is closest to 15,000

I can use a number line to help me figure out which ten, hundred, thousand, ten-thousand, etc. is closest to my number.

Example: Round 3,727 to the nearest 1,000

I can see that 3,727 is closest to 4,000



And of course, there are official rules (using place value) to follow to figure out which ten, hundred, thousand, ten-thousand, etc. my number is closest to.

1. Circle the digit in the place that you are rounding to.
2. Underline the digit in the place to the right of the circled digit.
3. If the underlined digit is 4 or less, the circled digit stays the same.
4. If the underlined digit is 5 or more, the circled digit increases (gets bigger) by one.
5. Write a zero for every place value (as placeholders) after the rounded digit.

Example: Round 852 to the nearest 100

852 The digit in the place to the right of the number I am rounding is 5 or more, so I will change the circled number to one more and change all the other place values to zero.

852 rounds to 900

Example: Round 54,925 to the nearest 10,000

54,925 The digit in the place to the right of the number I am rounding is 4 or less, so the circled number stays the same and all of the other place values change to zero.

54,925 rounds to 50,000

I also know... how to use these rules to round to a “smaller” place value inside a large number.

Example: Round 852 to the nearest 10

852 The digit in the place to the right of the number I am rounding is 4 or less, so the circled number stays the same and all of the other place values change to zero.

852 rounds to 850

Example: Round 54,925 to the nearest 1,000

54,925 The digit in the place to the right of the number I am rounding is 5 or more, so I will change the circled number to one more and change all the other place values to zero.

54,925 rounds to 55,000

And... I know how to use "rounding" to solve math problems when I don't need an exact answer.

For example: The teachers in 3rd, 4th, and 5th grade want to go on a field trip to the Science Museum. There are 185 students in 3rd grade, 228 students in 4th grade, and 139 students in 5th grade. Figure out about how many tickets the teachers should be prepared to buy. Round to the nearest hundred and the nearest ten to see which estimate is the better one. Explain your answer.

1. I use my "rounding" rules to figure out each grade level to the nearest hundred:

- 3rd grade has 185 which rounds to 200

- 4th grade has 228 which rounds to 200

- 5th grade has 139 which rounds to 100

When I add all of these hundreds together, I get 500. The estimate is 500 tickets.

2. I can also "round" to the nearest ten to figure out how many tickets the teachers need:

- 3rd grade has 185 which rounds to 190

- 4th grade has 228 which rounds to 230

- 5th grade has 139 which rounds to 140

When I add all of the hundreds together, I get 400. When I add all the tens together, I get 16 tens or 160. $400 + 160$ is 560. The estimate is 560 tickets.

I think rounding to the nearest ten for an estimate of 560 is the better answer because it is closer to the exact number the teachers need. Now they have a better idea of how much money they will need to buy the tickets.

Some new math words I am using with this standard: *Some of these are review words*

Round – to replace a number with one that tells *about* how much or how many

Rounding up – *changing the number* you are rounding in any place value *to* "**one bigger**" as long as the number to the right of it is 5 or more.

Rounding down – *keeping the number* you are rounding in any place value *the same* as long as the number to the right of it is 4 or less.

- You can help your child by asking her/him to solve problems using estimation or "rounding".

For example: In May our electric bill was \$224, in June it was \$287, and in July it was \$302. About how much money has our family spent on electricity over the last three months? $224 \rightarrow 200$, $287 \rightarrow 300$, and $302 \rightarrow 300$. Adding all of the hundreds gives me $200 + 300 + 300 = 800$. Our family spent about \$800 on electricity over the last three months. *Correct - don't forget to shut the lights when you leave a room!*

- You can help your child by having him/her practice rounding different place values in large numbers. Have your child use all the strategies she/he learns from his/her teacher.