

Math 4

1-5 Rounding Multi-Digit Whole Numbers

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| **Name:** |  | **Date:** |  |

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| **Common Core Standards** | [CCSS.MATH.CONTENT.4.NBT.3](http://www.corestandards.org/Math/Content/4/NBT/A/3/)  Use place value understanding to round multi-digit whole numbers to any place. |

1-5 Rounding Multi-Digit Numbers

**What does it mean to round?**

**Rounding is when you find the closest “round” number to any given number.**

**In this lesson we applied what we learned with “base 10” to round to the nearest 10, 100, and 1,000s.**

**Benchmark Numbers**

We also used **benchmark numbers** on a number lineto help us round our numbers.

We place our benchmark numbers on the number line.

If we’re rounding to the nearest **ten** our benchmark numbers will be the rounded tens on **both sides** of our number.

If we’re rounding to the nearest **hundred** our benchmark numbers will be the rounded hundred on **both sides** of our number.

If we’re rounding to the nearest **thousand** our benchmark numbers will be the rounded thousands on **both sides** of our number.

But what is a **“round number”?**

Let’s complete this activity to help us understand **round numbers,** and how to round by using a number line with benchmark numbers.

Activity:

Cut out the pieces to the number line and tape it together from end to end.

1. Draw a rectangle around the multiples of ten and fill it in with a different color for each multiple.
2. Circle all of the numbers with 5’s in them in-between the multiples of ten (5, 15, 25, 35, etc).
3. Mark a colored dot under each number the same color of the rectangle (multiple of 10) that it should round to.

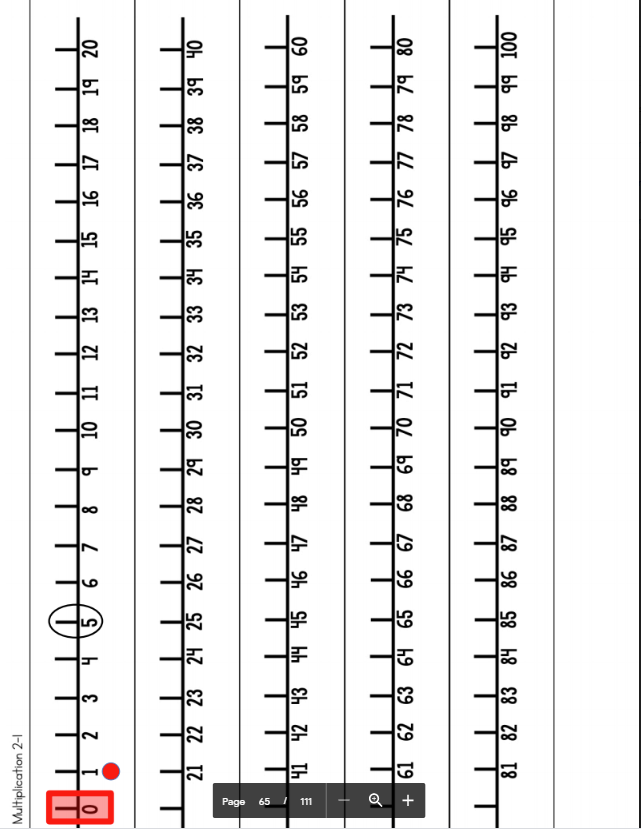
Part A:

What do you notice about the 5’s position in compared to where they are in-between different colored rectangles?

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

What do you notice about the benchmark numbers?

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We also learned how to use place value to help us round our numbers!

And we can remember rounding by place value with this simple rhyme:

**If it’s four or less give it a rest.**

**If it's five or more raise the score.**

When you want to use our rhyme just remember that you look at the place value below the place value you’re rounding to.

So, you look at the:

* **ones** place value to round to the nearest **ten**.
* **tens** place value to round to the nearest **hundred**.
* **hundreds** place value to round to the nearest **thousand**.

Part B:

Based on the pattern above, if you wanted to round to the nearest **thousand** what place value would you look at to apply our place value rhyme?

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What about if you wanted to round to the nearest **million?**

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Part C:

Let’s identify the place value to use our rounding rhyme!

**4,358,761​**

Identify:

Place the numbers in their correct period

**Fill in the table below for the above numbers:**

|  |  |  |
| --- | --- | --- |
| **Millions Period** | **Thousands Period** | **Hundreds Period** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hundreds** | **Tens** | **Ones** | **Hundreds** | **Tens** | **Ones** | **Hundreds** | **Tens** | **Ones** |
|  |  |  |  |  |  |  |  |  |

Question 2:

**How do you round 4,358,761 to the nearest hundred thousand using our rhyme?** (underline the place value you used)

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**Answer Key**

Part A:

What do you notice about the 5’s position in compared to where they are in-between different colored rectangles?

**They’re exactly in the middle between the multiples of ten.**

What do you notice about the benchmark numbers?

**The benchmark numbers all end in zero. They’re round numbers.**

Part B:

Based on the pattern above, if you wanted to round to the nearest **thousand** what place value would you look at to apply our place value rhyme, and why?

**We’d look at the hundreds place value, because you look at the place value below the one you’re rounding too.**

What about if you wanted to round to the nearest **million?**

**We’d look at the hundred thousands place.**

Part C:

|  |  |  |
| --- | --- | --- |
| **Millions Period** | **Thousands Period** | **Hundreds Period** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hundreds** | **Tens** | **Ones** | **Hundreds** | **Tens** | **Ones** | **Hundreds** | **Tens** | **Ones** |
|  |  | **4** | **3** | **5** | **8** | **7** | **6** | **1** |

**How do you round 4,358,761 to the nearest hundred thousand using our rhyme?** (underline the place value you used)

**We look at the ten thousands place, because that is the place value below the hundred thousands place. The ten thousands place has a value of 5… So, to apply our rhyme “five or more, give it a score”. Which means we round up to 4,400,000.**