**5.NBT.4**

Teacher Guide to Clarification

Instructional Math Materials

**Understand the place value system**

**5.NBT.4** Use place value understanding to round decimals to any place.

Place Value **UNDERSTANDING** to Round

**Example**: Round 14.235 to the nearest tenth.

* Students recognize that the possible answer must be in tenths thus, it is either 14.2 or 14.3. They then identify that 14.235 is closer to 14.2 (14.20) than to 14.3 (14.30).



Students should use **benchmark** numbers to support rounding. Benchmarks numbers are convenient. 0, 0.5, 1, and 1.5 are examples of benchmark numbers.

Which benchmark number is the best estimate of the shaded amount? Explain your thinking.

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Kansas Association of Teachers of Mathematics (KATM) Flipbooks. Questions or to send feedback: [melisa@ksu.edu](mailto:melisa@ksu.edu). Retrieved from: <http://katm.org/wp/wp-content/uploads/flipbooks/5FlipBookedited.pdf>

**You learned rounding using an algorithm**

Let’s round to the hundreds place

Put your pencil point under the digit in the hundreds place.

Look to the right.

Is the digit 5 or more?  This will let you know if you should Increases by 1 OR stay the same.

What happens to everything to the left of the hundreds place?

Those digits always remain the same.

What happens to everything to the right of the hundreds place?

Those digits become zero.

**Students now need to understanding rounding**

Students who have place value understanding are quick to round and can identify when they make an error when computing. Students need opportunities to see amounts as values on a number line so the algorithm will make sense.

**Coherence and Connections: Need to Know**

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| Grade Below | Grade-Level | Grade Above |
| 4.NBT.4 | **5.NBT.4**  5.NBT.1  5.NBT.3  5.NBT.3a  5.NBT.3b | None |

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| **Evidence**  **Statement Key** | **Evidence Statement Text** | **Clarifications** | **MP** |
| 5.C.3  PBA | Reason about the place value system itself.  Content Scope: Knowledge and skills articulated in 5.NBT.A | i) Tasks do not involve reasoning about place value in service of some other goal (e.g., to multiply multi-digit numbers). Rather, tasks involve reasoning directly about the place value system, in ways consistent with the indicated content scope. | 3, 7, 6 |
| 5.NBT.4  EOY | Use place value understanding to round decimals to any place. | i) Tasks have “thin context” or no context. | 2 |

*PARCC Mathematics Evidence Tables. (*2013, April). Retrieved from:   
<http://www.parcconline.org/assessment-blueprints-test-specs>

**Classroom Resource**

Power Point

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| Problem |  |
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**HOT Questions**

Circle all the numbers which when rounded to the nearest tenth place is 4.5

4.41 4.53 4.46 4.519 4.489

4.49 4.59 4.51 4.059 4.479

If a 5-digit number was rounded to **50.89**, what would have been the lowest and highest values for the number, when rounded to the nearest hundred place?

Lowest 5-digit number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Highest 5-digit number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain your thinking.

Is 3.462 closer to 3 or to 4?

Is it closer to 3.4 or to 3.5?

Is it closer to 3.46 or to 3.47?

The class was asked to round 19.684 to the nearest tenth. Joey raised his hand and answered 19.6. Heather answered 19.7. And Patrick answered 19.68. Who do you think is correct? Why? What do you think the other students did to get their answers?

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Illustrative Mathematics  
<https://www.illustrativemathematics.org/illustrations/1804>

Inside Mathematics  
<http://www.insidemathematics.org/assets/common-core-math-tasks/decimals.pdf>

Howard County Wiki  
<https://grade5commoncoremath.wikispaces.hcpss.org/Assessing+5.NBT.4>

PARCC sample EOY TEST

<http://practice.parcc.testnav.com/>

