



MATH WITH MR DJ

GRADE 5 · NUMBER & OPERATIONS IN BASE TEN

ROUNDING DECIMALS

Today's goal: I can use place-value understanding to round decimals to any place.



Tan



Digit



Blaze



Pi



The question rounding asks

1 Which two tenths is it between?

2 Which one is it nearer?

TURN & TALK

Name the two candidates FIRST.



3.548 to the nearest tenth

- 1 Between 3.5 and 3.6.
- 2 Midpoint 3.55. Is 3.548 past it?

REMEMBER

No. So 3.5.



BIG IDEA 2

The tempting method

1 $3.548 \rightarrow 3.55$ (nearest hundredth)

2 $3.55 \rightarrow 3.6$ (nearest tenth)

REMEMBER

Both steps correct. Answer wrong.



BIG IDEA 3

Why staging breaks it

- 1 The 8 in the thousandths should never be consulted.
- 2 Staging lets it push the 4 up to a 5.

REMEMBER

Always round the ORIGINAL number. Once.



BIG IDEA 4

Keep the place you rounded to

1 0.96 to the nearest tenth is 1.0.

2 Not 1.

REMEMBER

The 0 says “this is tenths”.



BIG IDEA 5

Exactly halfway

- 1 12.5 is as near to 12 as to 13.
- 2 We round up. Because we agreed to.

REMEMBER

A convention, not a fact about nearness.



Something went wrong here...

THE PROBLEM

Round to the nearest whole number: 8.5, 0.49, 19.62.

WHAT A STUDENT DID

Answered 1 for 0.49, rounding up because the digits after the point “look big”. 0.49 is less than a half, so it rounds to 0 — and 0 is a legitimate answer to a rounding question.

YOUR MISSION

What went wrong? What's the right answer?



Round to the nearest whole number: 8.5, 0.49, 19.62.

- 1 8.5 is exactly halfway between 8 and 9 — up by agreement, 9.
- 2 0.49 is between 0 and 1, midpoint 0.5, below it — 0.
- 3 19.62 is between 19 and 20, midpoint 19.5, past it — 20.

Answer: 9, 0 and 20



Pick your pepper!



MILD

Round to the nearest tenth: 2.47, 0.83, 5.05.

#1 on your practice sheet



MEDIUM

A shelf is 1.96 m long. Round it to the nearest tenth of a metre, and write the answer with its unit.

#3 on your practice sheet



SPICY

Round 0.749 to the nearest tenth. Then round 0.741 to the nearest tenth. Should they be the same?

#5 on your practice sheet

How's it going?



3 • Got it!

I could teach it



2 • Almost

One more example, please



1 • Not yet

I need some help

NOW YOU!

Practice sheet: everyone does Mild & Medium, then climb the peppers.

Stuck? Look back at Mr DJ's example at the top of the sheet.

Need it again? Watch “How to Write Decimals in Word Form (Place Value, Expanded Form & Rounding)” on YouTube @MathWithMrDJ

Brain break: 3 new daily puzzles at puzzles.mathwithmrdj.com

