



GRADE 8 · FUNCTIONS · HOMEWORK

WHAT A FUNCTION IS

Today's goal: I can understand that a function is a rule that assigns to each input exactly one output and understand that the graph of a function is the set of ordered pairs consisting of an input and the corresponding output.



Pick your peppers!

Everyone does Mild & Medium. Then climb as high as you can.



Mild

Tan the Turtle



Medium

Digit the Fox



Spicy

Blaze the Dragon



Extra Spicy

Pi the Owl

WATCH MR DJ SOLVE

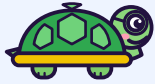
Is this a function? (7,2) (8,3) (7,5)

1 Input 7 gives 2 and 5.

Answer: **no**



REMEMBER Each input gets exactly one output. Repeated outputs are fine; a repeated input with different outputs is not.



FAMILY CORNER

No need to remember this math yourself! Ask your student to teach you Mr DJ's example, then try the first Mild problem together.



MILD

Tan the Turtle: Slow and steady. Warm up!

1 Is this a function? (1,1) (2,4) (3,9)

Answer

2 Is this a function? (1,6) (2,6) (3,6) (4,6)

Answer

**OOPS ALERT**

Careful on #1! Blaze spotted the slip Mr DJ sees most: Said no for lack of a stated rule.

**MEDIUM**

Digit the Fox: Stretch your brain.

- 3 Is $y = \sqrt{x}$ a function for $x \geq 0$? Explain.

Answer

- 4 Sketch a graph that fails the vertical line test.

Answer

**SPICY**

Blaze the Dragon: Bring the heat!

- 5 Write the definition of a function, then say one thing that is NOT required.

Answer

- 6 Ravi says “if two inputs give the same output it is not a function.” Correct him.

Answer



EXTRA SPICY

Pi the Owl: Big-brain challenge.

- 7 Each student in a class has exactly one date of birth. Is “student $\rightarrow$ date of birth” a function? Is the reverse?

Answer



How did this sheet feel?



Easy for me



Just right



Made me think

Stuck? Watch Mr DJ explain it

Step-by-step video lessons on YouTube: [youtube.com/@MathWithMrDJ](https://www.youtube.com/@MathWithMrDJ)

Brain break: daily puzzles

Three new math puzzles every day, free: puzzles.mathwithmrdj.com