



GRADE 6 · EXPRESSIONS & EQUATIONS · HOMEWORK

WRITING & GRAPHING INEQUALITIES

Today's goal: I can write inequalities in the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world problem, write inequalities in the form $x \geq c$ or $x \leq c$ to represent a constraint or condition in a mathematical problem, identify that inequalities in the form $x > c$ or $x < c$ have infinitely many solutions and represent solutions of inequalities in the form $x > c$ or $x < c$ on number line diagrams.



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

WATCH MR DJ SOLVE

Write an inequality for at least 21 and say which circle you would draw.

- 1 'At least' includes 21.

Answer: $x \geq 21$; closed circle



REMEMBER 'More than' $\rightarrow >$ · 'less than' $\rightarrow <$ · 'at least' $\rightarrow \geq$ · 'at most' $\rightarrow \leq$. **Open circle** = boundary excluded; **closed circle** = boundary included. The arrow shows which way the range runs.



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 Write an inequality for **more than 9**. Is 9 a solution?

Answer

- 2 From the set {1, 5, 6, 9}, list every solution of $x < 6$.

Answer

**OOPS ALERT**

Careful on #1! The slip Mr DJ sees most: Included 9.

**MEDIUM**

Digit the Fox: Stretch your brain.

- 3 Write an inequality for **at most 40** and describe its graph.

Answer

- 4 For $x > 2.5$, is 3 a solution? Give one non-whole-number solution too.

Answer

- 5 Write an inequality for **fewer than 50** and say whether 50 is a solution.

Answer

**SPICY**

Blaze the Dragon: Bring the heat!

- 6 A ride requires riders to be at least 48 inches tall. Write an inequality, describe the graph, and explain whether someone exactly 48 inches can ride.

Answer

- 7 Explain why $x > 0$ cannot be answered with a single number, and describe its solution set in words and as a graph.

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