



Writing & solving inequalities

GRADE 7 MATH

Name _____

Date _____

Do this on your own — the worked example shows what to do. Give the solution set and test a value.
One skill: **writing and solving inequalities**.

WORKED EXAMPLE

Solve like an equation. Multiplying or dividing by a negative reverses the inequality — test a value to confirm. Symbols with a line ($\leq$, $\geq$) include the boundary; strict symbols ($<$, $>$) exclude it.

1. Solve $6x + 2 < 20$.

FLUENCY

Show your thinking

Answer

2. Test $x = 2$ in the original inequality.

FLUENCY

Show your thinking

Answer

3. Test $x = 3$ in the original inequality. Is 3 a solution?

APPLICATION

Show your thinking

Answer

4. Solve $-5x \geq 15$.

APPLICATION

Show your thinking

Answer

5. Test $x = -3$ and $x = -2$ in $-5x \geq 15$. What do the two tests show?

REASONING

Show your thinking

Answer

6. A club charges \$10 to join plus \$3 per event. A member has \$25. Write an inequality and find the most events they can attend.

REASONING

Show your thinking

Answer

7. Explain the difference between the answers to “solve $3n \leq 15$ ” and “what is the largest whole number n with $3n \leq 15$?”

REASONING

Show your thinking

Answer

8. A student says solving an inequality always means flipping the sign at the end. Give an example where no flip is needed, and state when it actually is.

REASONING

Show your thinking

Answer