

Algebra 1
Writing Inequalities from Word Problems

Writing Linear Inequalities from Context | A1-U03-P01

96 problems · Four activity formats

01	Answer Bank Challenge	24 tasks
02	Grid Rounds	24 tasks
03	Match & Move	24 cards
04	Error Analysis & Strategy	24 tasks
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Topic focus
Across 96 tasks this topic asks for inequality interpretation with boundary justification and method choice with justification, followed by inequality interpretation with boundary justification.
8 PDFs and a README; 53 buyer pages.

Algebra 1

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Name: _____ Date: _____ Class: _____

Answer each question and record the matching bank letter. Give exact values. A value without its unit is not a complete answer.

A student remains eligible only while the absence count a has not reached 5. Write the direct comparison. Bank label: _____	Give an equivalent comparison to $m \leq 0$ that begins with 0. Bank label: _____						
A review is assigned when q, the number of missed questions, is 12 or fewer. Write the inequality. Bank label: _____	Test $q = \frac{1}{2}$, $q = \frac{3}{4}$, and $q = 1$ against $q > \frac{3}{4}$. <table border="1" data-bbox="824 840 1469 968"> <thead> <tr> <th>Proposed value</th> </tr> </thead> <tbody> <tr> <td>$\frac{1}{2}$</td> </tr> <tr> <td>$\frac{3}{4}$</td> </tr> <tr> <td>$\frac{3}{4}$</td> </tr> <tr> <td>$\frac{3}{4}$</td> </tr> <tr> <td>1</td> </tr> </tbody> </table> Bank label: _____	Proposed value	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	1
Proposed value							
$\frac{1}{2}$							
$\frac{3}{4}$							
$\frac{3}{4}$							
$\frac{3}{4}$							
1							
A lift may carry its full 900-kilogram rating but nothing heavier. Write the constraint for load w. Bank label: _____	Express $8 < x$ with x first. Bank label: _____						
Test $y = -0.1$, $y = 0$, and $y = 0.1$ in $y > 0$. <table border="1" data-bbox="151 1495 797 1617"> <thead> <tr> <th>Proposed value</th> </tr> </thead> <tbody> <tr> <td>-0.1</td> </tr> <tr> <td>0</td> </tr> <tr> <td>0.1</td> </tr> </tbody> </table> Bank label: _____	Proposed value	-0.1	0	0.1	If k is an integer and $k \geq -3$, identify the boundary's status and the least possible k. Bank label: _____		
Proposed value							
-0.1							
0							
0.1							

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Begin at START. Answer the card, then find the matching final answer at the top of another card. Use the recording sheet for your reasoning. Visit each card once and continue to FINISH.

Incoming: $T > -3$. A specification says, 'A reading of -5 is no greater than the signed change c.' Express the permitted c-values with c on the left and explain equality. Your response: _____	Incoming: $c \geq -5$, with -5 included. A signed change c is required to be at most -4. State the inequality and do not replace the negative bound with a magnitude. Your response: _____
Incoming: $t \geq 12$. A temperature T exceeds -3 degrees Celsius. State the inequality, keeping the negative boundary. Your response: _____	Incoming: $-6 \geq c$. A reservation permits a maximum of 9 guests. Write a direct bound for g, the guest count. Your response: _____
Incoming: $L > 6.2$. Rewrite $0 \geq h$ with h as the subject on the left. Your response: _____	Incoming: $s \geq 86$. Rewrite $x < 7$ with 7 on the left while preserving exactly the same permitted x-values. Your response: _____

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Evaluate the supplied statement or method. Say whether it is correct, repair it if it is not, and verify the result exactly. Not every prompt contains an error.

Choose the most reliable method, briefly justify the choice, and then complete the original task. Original task: For $p \leq 250$, determine the status of $p = 0$, $p = 250$, and $p = 251$.

Proposed value
0
250
251

Label	Proposed method
A	Substitute each proposed value into the original comparison and evaluate both sides.
B	Compare only the absolute values and ignore the comparison symbol.
C	Decide only from how close each value is to the boundary.

For real x , compare $x > 2$ and $x \geq 2.5$. Which condition is stronger, and what value separates them?

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Full Worked Solutions - excerpt

Worked example

Problem. A student remains eligible only while the absence count a has not reached 5. Write the direct comparison.

Answer. $a < 5$.

Explanation and check.

Counts 0 through 4 have not reached five; equality at five fails.

Worked example

Problem. Give an equivalent comparison to $m \leq 0$ that begins with 0.

Answer. $0 \geq m$.

Explanation and check.

Zero being greater than or equal to m says exactly that m is at most zero.