

Grade 7 · Two-Step Inequalities · Worksheet

Common Core 7.EE.B.4b · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

This grade 7 two step inequalities worksheet gives 20 problems on two-step inequalities, ordered from easy to hard, with a separate answer key.

These twenty problems practice Common Core 7.EE.B.4b: solving two-step inequalities of the form $px+q>r$ and $px+q<r$, graphing each solution set, and reading the answer in context. The first problems keep the coefficients positive. Later problems introduce negative coefficients and finish with word problems about money, weight, temperature and height.

Grade 7 Common Core: 7.EE.B.4b

Grade 7 Two Step Inequalities Worksheet: problems 1-5

Problem 1: Solve and graph

Solve $2x+3>11$. Graph the solution on the number line.

Figure: Blank number line from -2 to 8 with tick marks at every integer

Use this number line for the graph.

Problem 2: Greater than

Solve $3x+2>17$. Graph the solution on the number line.

Figure: Empty number line from 0 to 10

Use this number line for the graph.

Problem 3: Subtract, then divide

Solve $3x-5<10$. Graph the solution on the number line.

Figure: Blank number line from 0 to 10 with tick marks at every integer

Use this number line for the graph.

Problem 4: Less than

Solve $4x - 6 < 10$. Graph the solution on the number line.

Figure: Empty number line from 0 to 8

Use this number line for the graph.

Problem 5: Include the endpoint

Solve $4x + 7 \geq 23$. Then test one value from your solution set to check it.

Grade 7 Two Step Inequalities Worksheet: problems 6-10

Problem 6: Include the endpoint, again

Solve $2x + 9 \geq 3$. Graph the solution on the number line.

Figure: Empty number line from -6 to 4

Use this number line for the graph.

Problem 7: At most

Solve $5x - 2 \leq 18$. Graph the solution on the number line.

Figure: Blank number line from 0 to 8 with tick marks at every integer

Use this number line for the graph.

Problem 8: Test the values

Solve $3x - 4 \leq 11$. Then tell which of the values $x=3$, $x=5$ and $x=6$ are solutions.

Problem 9: A fraction coefficient

Solve $\frac{x}{2} + 3 > 7$.

Problem 10: Divide by five

Solve $\frac{x}{5} - 1 \leq 2$.

Grade 7 Two Step Inequalities Worksheet: problems 11-15

Problem 11: Dividing by a negative

Solve $-2x + 1 < 9$. Graph the solution on the number line.

Figure: Blank number line from -8 to 2 with tick marks at every integer

Use this number line for the graph.

Problem 12: Flip the sign

Solve $-4x + 3 > 19$. Graph the solution on the number line.

Figure: Empty number line from -8 to 2

Use this number line for the graph.

Problem 13: Negative coefficient, closed circle

Solve $-3x - 4 \geq 5$. Describe the graph of the solution set.

Problem 14: Negative fraction

Solve $-\frac{1}{2}x - 3 \leq 2$.

Problem 15: School store budget

Jamal has \$50 to spend at the school store. He buys a cap for \$12 and then some T-shirts at \$9 each. Write and solve an inequality for the number of shirts s . What is the greatest number of shirts he can buy?

Figure: Jamal has