

Grade 7 - Two-Step Inequalities - Worksheet

Common Core 7.EE.B.4b · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

These 20 problems practice solving two-step inequalities, graphing solution sets on a number line, and interpreting solutions in context (Common Core 7.EE.B.4b). They start with the basic skill, move to different kinds of numbers and multistep work, and end with six word problems set in everyday situations such as shopping, sports, and travel.

Show every step of your work, and use the answer key only after you have tried each problem.

Grade 7 · Common Core State Standards: **7.EE.B.4b**

Exercise 1 - Greater than

Solve the inequality and graph the solution. $5x+4>29$

Exercise 2 - At most

Solve the inequality and graph the solution. $3x-5\leq 10$

Exercise 3 - Divide by 2

Solve the inequality and graph the solution. $\frac{1}{2}x+1\geq 4$

Exercise 4 - Reverse the symbol

Solve the inequality and graph the solution. $-2x+4<10$

Exercise 5 - With parentheses

Solve $4(x-1)>12$ and graph the solution.

Exercise 6 - Decimals

Solve the inequality and graph the solution. $\frac{1}{2}x-2\leq 1\frac{1}{2}$

Exercise 7 - Negative at most

Solve the inequality and graph the solution. $-3x-6\geq 9$

Exercise 8 - Fraction coefficient

Solve the inequality and graph the solution. $\frac{1}{3}x + 2 < 5$

Exercise 9 - Subtract from a constant

Solve the inequality and graph the solution. $-x + 5 > 2$

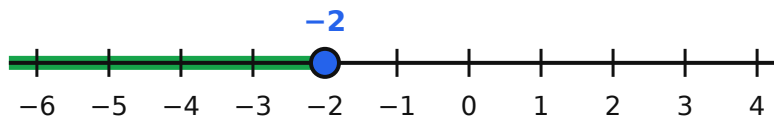
Exercise 10 - Negative outside

Solve $-4(x+2) \leq 12$ and graph the solution.

Exercise 11 - Is it a solution?

Is $x = 7$ a solution of $3x - 4 > 15$? Is $x = 6$?

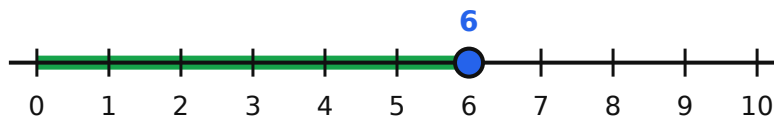
Exercise 12 - Read the graph



A graph of the solution set.

Write the inequality shown by the graph. Name two numbers in the solution set and one that is not.

Exercise 13 - Ticket budget



Possible numbers of tickets.

Maya has \$40. Each ticket costs \$6 and there is one \$4 fee. Write and solve an inequality for the number of tickets t she can buy, and state the greatest whole number.

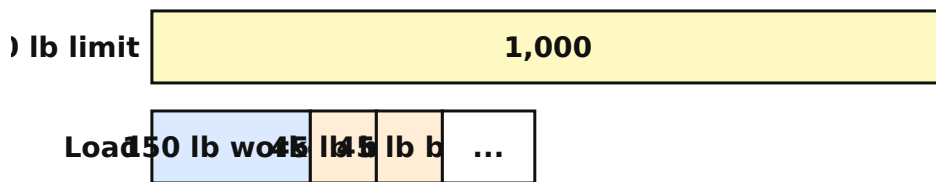
Exercise 14 - Earning goal

Hours h	$12h + 13$
4	\$61
5	\$73
6	\$85
7	\$97

Earnings by hour.

Sofia needs at least \$85. She has \$13 and earns \$12 per hour babysitting. Write and solve an inequality for the hours h .

Exercise 15 - Elevator limit



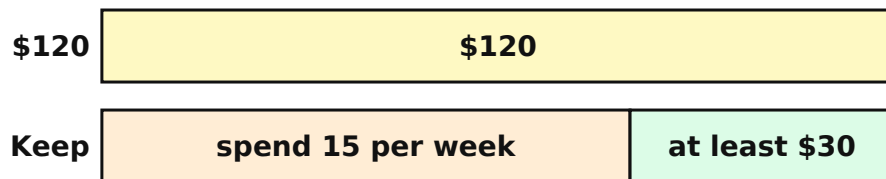
Worker plus boxes.

An elevator holds at most 1,000 pounds. A worker weighs 150 pounds and each box weighs 45 pounds. Write and solve an inequality for the number of boxes b , then state the greatest whole number of boxes.

Exercise 16 - Cooling down

At noon the temperature is 50°F and falls 4 degrees each hour. Write and solve an inequality to find when the temperature is below 32°F , using h for hours after noon.

Exercise 17 - Savings plan



Spend and keep.

Priya has \$120 and spends \$15 each week. She wants to keep at least \$30. Write and solve an inequality for the number of weeks w .

Exercise 18 - Taxi fare

Miles	Fare
0	\$3.50
4	\$12.50
7	\$19.25

Taxi fares.

A taxi charges \$3.50 plus \$2.25 per mile. Jamal has \$20. Write and solve an inequality for the miles m , then state the greatest whole number of miles.

Exercise 19 - Phone minutes

A phone plan costs \$15 plus \$0.08 per minute. Liam wants to pay less than \$25. Write and solve an inequality for the minutes m .

Exercise 20 - Car wash goal

The robotics club needs more than \$150 for a trip. It has \$45 and earns \$3.50 for each car washed. Write and solve an inequality for the number of cars c , then state the least whole number of cars.