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## Solving linear inequalities worksheet

Here: Home → work → inequality Use this worksheet generator to create customizable worksheets for linear inequalities in one variable. These worksheets are intended mainly for pre-algebra and algebra 1 courses (classes 7-9). There are nine types of problems. The first two are knit with rendering simple inequalities and writing inequality from a number line chart. The third asks the student to resolve the (easy) inequality in the file. Other types of problems have different types of inequalities within 20 years, ranging from simple to complex (such as single-stage inequalities, two-stage inequalities, variable inequalities on both sides or brackets). Optionally, you can require the student to render the solution set to a number row. You can also choose to exclude multiplication or division by negative number, which reverses the sign of inequality and is also the most difficult operation for students. This option is useful for teaching inequalities at the simplest level of beginners. Basic instructions for worksheets Each worksheet is randomly generated and therefore unique. The response key is automatically generated and placed on the other side of the file. You can generate worksheets in either HTML or PDF format—both are easy to print. To get a PDF worksheet, simply press the button named Create PDF or Create PDF Worksheet. To get a worksheet in html format, press the View button in the browser or Create html worksheet. This has the advantage that you can save the worksheet directly from the browser (select File → Save) and then edit it in Word or another word processing program. Sometimes a generated worksheet is not exactly what you want. Try again! To get another worksheet with the same options: PDF format: return to this page and press the button again. Html format: just refresh the worksheet page in the browser window. Use these quick links to create some common types of worksheets for typing expressions. Below, with the actual generator, you can create worksheets according to your exact specifications. See also Worksheets for linear equations Worksheets to simplify expressions Worksheets for evaluating expressions with variables Worksheets for writing variables with variables from verbal algebra expressions are often taught abstractly with little or no emphasis on what is algebra or how it can be used to solve real problems. Just as English can be translated into other languages, word problems can be translated into the mathematical language of algebra and easily solved. Real World Algebra explains this process in an easy to use format using cartoons and drawings. This makes self-learning easy for both the student and every teacher who will never fully understand algebra. It contains chapters on algebra and money, algebra and geometry, algebra and physics, algebra and levers and Other. Designed for children in classes 4-9 with higher math ability but it could also be used by older students and adults. It contains 22 chapters with instructions and problems on three levels of difficulty. =&gt; More information x is an integer that is  $-1 \leq x \leq 4$ . A list of all the numbers that meet this inequality. On such issues, consideration should be given to whether inequalities are inclusive or in this case we have, x has any value greater than -1 and x has any value less than 4 Therefore there are integers that will satisfy inequality.: -1,0,1,2,3 Solve inequality  $5a - 4 \geq 2a + 8$  First, add 4 to both sides of the inequality to get,  $\begin{aligned} &5a - 4 \geq 2a + 8 \\ &5a - 4 + 4 \geq 2a + 8 + 4 \\ &5a \geq 2a + 12 \end{aligned}$  Then, subtracting 2a from both sides to get,  $\begin{aligned} &5a \geq 2a + 12 \\ &5a - 2a \geq 2a + 12 - 2a \\ &3a \geq 12 \end{aligned}$  Finally, divide both sides 3a +12  $\div 3a$  to get,  $\begin{aligned} &3a \geq 12 \\ &\frac{3a}{3} \geq \frac{12}{3} \\ &a \geq 4 \end{aligned}$  Solve inequality  $5 \leq 2x - 3 \leq 13$  First, add 3 to each side of inequality (Remember what you do on one side you do for all parties, even if there are 3 pages) to get  $\begin{aligned} &5 + 3 \leq 2x - 3 + 3 \leq 13 + 3 \\ &8 \leq 2x \leq 16 \end{aligned}$  Finally, divide the two sides 2 to get there,  $\begin{aligned} &8 \leq 2x \leq 16 \\ &\frac{8}{2} \leq \frac{2x}{2} \leq \frac{16}{2} \\ &4 \leq x \leq 8 \end{aligned}$  When regrouping inequality, you perform the same operation on both sides of the inequality without changing it (just as you would with the equation), but with one exception: If you multiply or divide by a negative number, then the inequality sign changes direction For example, if we have to solve inequality  $-2x \geq 4$ , we have to divide both sides by -2,  $\begin{aligned} &-2x \geq 4 \\ &\frac{-2x}{-2} \leq \frac{4}{-2} \\ &x \leq -2 \end{aligned}$  Solve the inequality  $\frac{4x+4}{2} \geq x$  [3 marks] We need to get rid of the fraction first by multiplying by 2  $\{4x+4\} \geq 2x$  Then subtract  $4x \geq 2x$  Then divide by  $-2 \leq x$  Remember the sign changes direction when multiplying or dividing by a negative number. We solve this inequality by simply rearranging it to make x the subject,  $\begin{aligned} &4x + 4 \geq 2x \\ &4x - 2x + 4 \geq 2x - 2x \\ &2x + 4 \geq 0 \\ &2x \geq -4 \\ &\frac{2x}{2} \geq \frac{-4}{2} \\ &x \geq -2 \end{aligned}$  Hence to can take any value greater than  $\frac{1}{5}$  We solve this inequality by simply rearranging it to make x the subject,  $\begin{aligned} &5x - 1 \geq 3x \\ &5x - 3x - 1 \geq 3x - 3x \\ &2x - 1 \geq 0 \\ &2x \geq 1 \\ &\frac{2x}{2} \geq \frac{1}{2} \\ &x \geq \frac{1}{2} \end{aligned}$  Hence x can take any value less than 7 solve this inequality by simply rearranging it to make x the subject in the center of the inequality,  $\begin{aligned} &4 - 3x \leq 19 \\ &-3x \leq 15 \\ &3x \geq -15 \\ &x \geq -5 \end{aligned}$  Preto x môže mať akúkoľvek hodnotu väčšiu alebo rovnú -5 Riešime to to simply regroup so that x subject in the middle of inequality,  $\begin{aligned} &5 \leq x \leq 10 \\ &10 \leq x \leq 13 \\ &13 \leq x \leq 17 \end{aligned}$  hence  $x = \text{can= take= any= value= greater= than= } -1 = \text{and= less= than= } \frac{13}{2} = \text{try= a= revision= card= on= this= topic= we= use= inequality= as= a= sentence= using= other= than= the= sign=(equals)= the= symbols=}$  the most common inequalities. In addressing sentence inequality, you will follow the same method that you would use if it were an equation with the following exception. The direction of inequality changes if you multiply or divide both sides by -ve. Then we will make this variation a negative multiplication of property inequality. If a, b and c are real numbers and c has a -ve value, the conditions of the variables will be bc or  $\frac{b}{c}$ ; if  $\frac{a}{b}$ , then the variables ac and  $\frac{bc}{a}$ ; example:  $\frac{a}{b} \geq \frac{c}{d}$  solve for  $x = 3 = x = -7 = 8$ ; 20. Step 1:  $3x - 7 \geq 20 - 7$ ; 20 - 7; (1) Step 2:  $3x \geq 27$  Step 3:  $x \geq 9$ . To verify the solution, you will observe either  $x = 9$  making equations (1) true or not. Although 9 is not the solution, it is a key value or distribution point that is necessary to explore the solution.  $3x - 7 = 20$  Step 1:  $3(9) - 7 = 20$  Step 2:  $27 - 7 = 20$ . Then we select a value greater than 9 to 10. Keep to whether the real inequality is true or not.  $3x - 7 \geq 20$  Step 1:  $3(10) - 7 \geq 20$  Step 2:  $30 - 7 \geq 20$  Step 3:  $23 \geq 20$ . It's a real sentence. It's hard to write all the larger than 9 numbers together, so we'll use the set builder entry.  $\{x | x \geq 9\}$  These worksheets explain how to balance equations that contain linear inequalities. We recommend that you have colored pencils at hand to help shade the charts. Page 2 [Home] This worksheet is a PDF. You'll need Adobe Acrobat Reader to view your worksheet or replies. Each worksheet can consist of several pages, scroll down to see everything. Learn from home Teachers need to find a maths teacher? Did you like the article? 5.00/5 - 1 vote(s)Loading... vote(s)Loading... &lt;/frac{13}{2}\end{aligned}&gt;