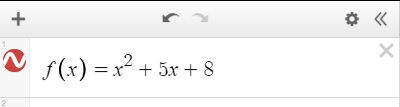
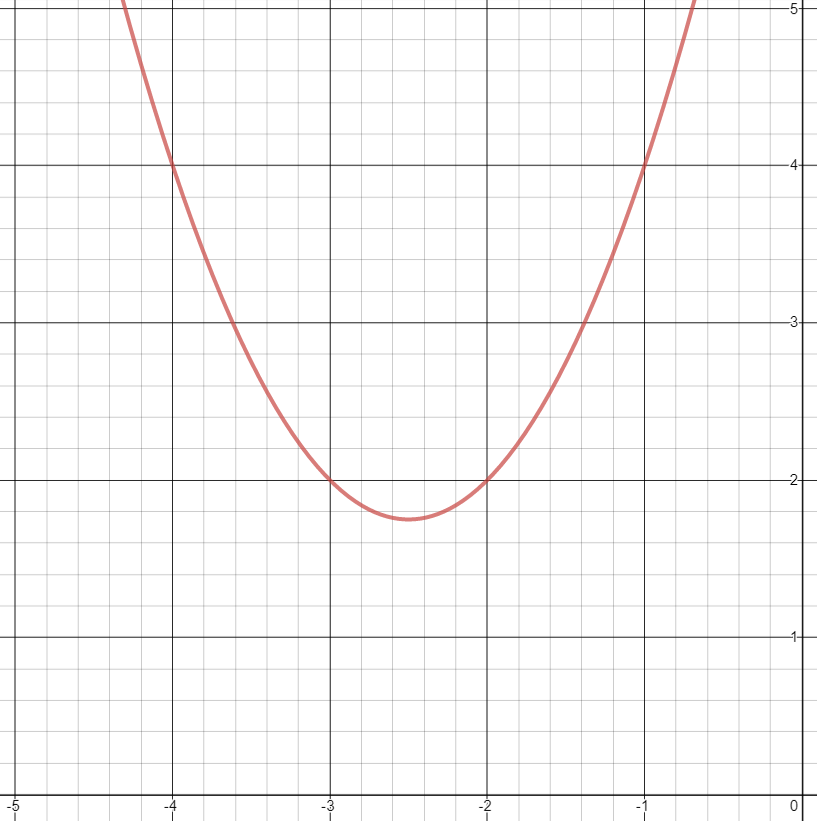
 Using desmos to solve inequalities

Solve the inequality

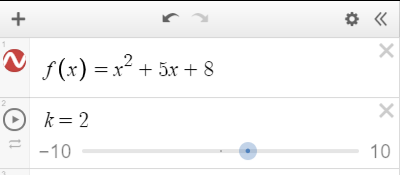
The inequality above is in the form where is quadratic and is constant.

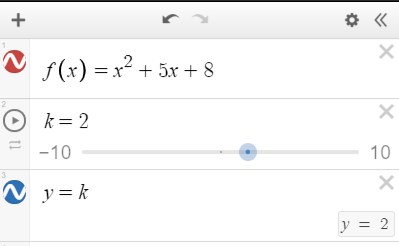
* Define by entering ***f(x)=x^2+5x+8*** into the input box on the left hand side. 

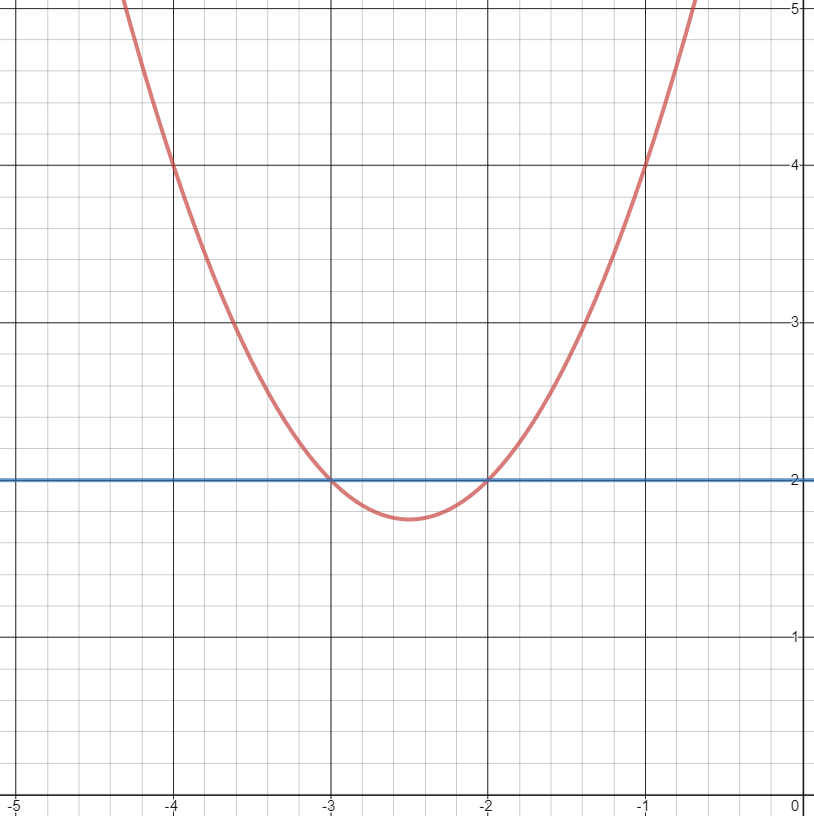
The curve for will be displayed automatically.



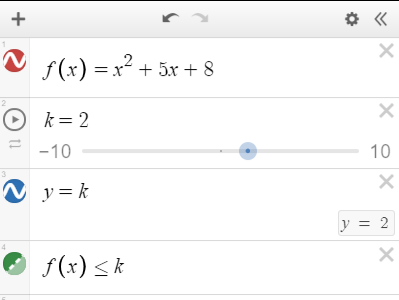
* Define by entering ***k=2*** into an input box below .



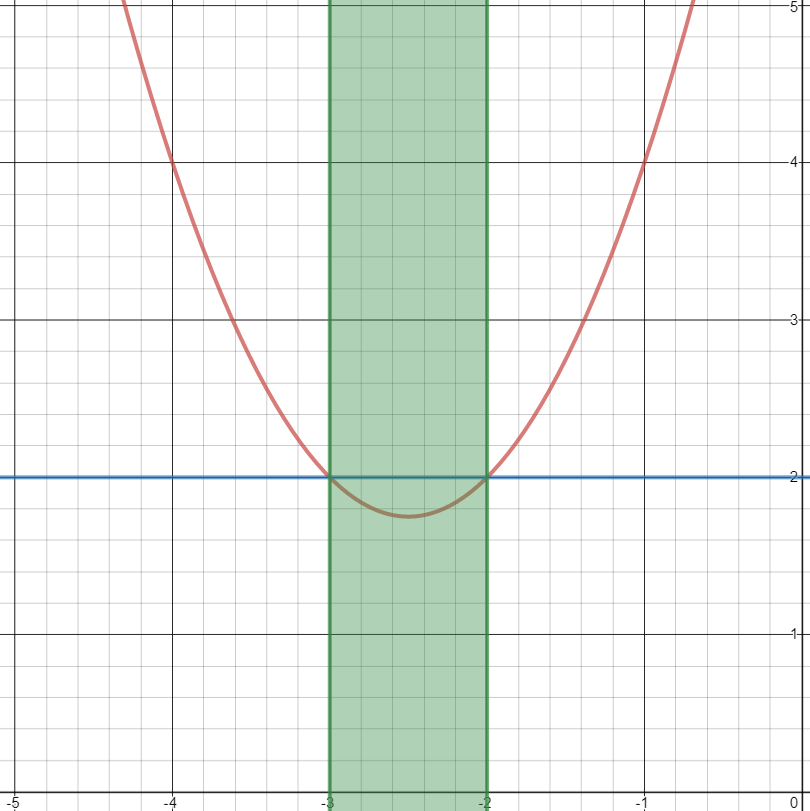
* Enter ***y=k*** into an input box below to display the line 



* Form the inequality statement by entering ***f(x)<=k*** as and have already been defined.



The regions for will automatically be displayed.



Reading the values for where the boundaries of the inequalities region cross the -axis gives the solution , which coincide with the -ordinates of the intercepts between the curve and the line.

**Source**: [Solving inequalities graphically](https://www.desmos.com/calculator/h2uplkjkhp) desmos activity.