

Graphing:

Graph the following functions $f(x)$ & $g(x)$. Then determine the values of x , where $f(x) > g(x)$. Be sure to write your answer in Set Notation

#1 $f(x) = \frac{1}{2}x - 2$ $g(x) = -\frac{1}{2}x + 2$	#2 $f(x) = -\frac{1}{6}x + 1$ $g(x) = \frac{2}{3}x - 4$	#3 $f(x) = \frac{2}{5}x$ $g(x) = 2$	#4 $f(x) = \frac{3}{4}x + 1$ $g(x) = 3\left(\frac{1}{4}x + \frac{1}{3}\right)$
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Algebraically:

Solve the following inequalities to find the values of x , where $f(x) < g(x)$. Be sure to write your answer in Set Notation

#1 $f(x) = \frac{3}{4}x - 5$ $g(x) = -2x + 6$	#2 $f(x) = -x - 1$ $g(x) = x + 5$	#3 $f(x) = \frac{2}{3}x - 4$ $g(x) = -\frac{5}{3}x + 3$	#4 $f(x) = \frac{1}{2}x - \frac{1}{4}$ $g(x) = -\frac{2}{3}x + \frac{3}{2}$
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In Context (Word Problems):

Set up two functions based on the given word problem. Then solve to find the solution to the word problem using an inequality. Be sure to write your answer in a complete sentence.

#1	#2	#3	#4
<p>A new company offers customers the opportunity to watch TV shows on their computer (or tablet, or smart phone). The company has two plans that customers can choose from:</p> <ul style="list-style-type: none"> Plan A: Join as a Premier Member, where you pay a monthly \$14 membership fee plus \$2 for each TV show you watch. Plan B: Join as a Regular Member, which has no membership fee, but charges \$5 for each TV show you watch in a month. <p>Determine how many TV shows you need to watch in order for the Premier Membership to be the better bargain.</p>			