

Exercise A.9.63 Consider $3x - 7 > 2$. Solve and express in set notation, interval notation, and graph.

Solution

With $3x - 7 > 2$, we have $3x > 2 + 7 = 9$
 or $3x/3 > 9/3$ or $x > 3$. So the solution set is $\{x \in \mathbb{R} \mid x > 3\}$ or, in interval notation, $(3, \infty)$. The graph is

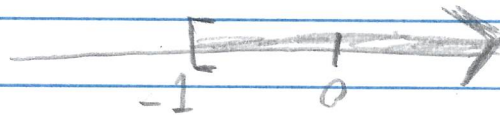


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Exercise A.9.85 Consider $x(4x+3) \leq (2x+1)^2$. Express the solution in set notation, interval notation, and graph.

Solution

With $x(4x+3) \leq (2x+1)^2$ we have
 $4x^2 + 3x \leq 4x^2 + 4x + 1$ or $3x \leq 4x + 1$
 or $-1 \leq 4x - 3x$ or $-1 \leq x$. The solution set is $\{x \in \mathbb{R} \mid x \geq -1\}$ or, in interval notation, $[-1, \infty)$. The graph is



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