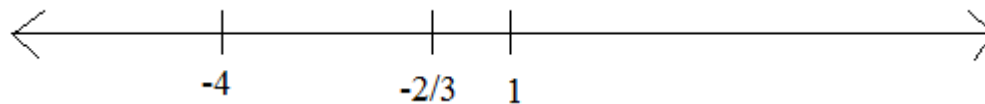


Solve the Inequality $(3x + 2)(x + 4)(x - 1) \leq 0$

- Add or subtract Quantities to both sides to get zero on one side.

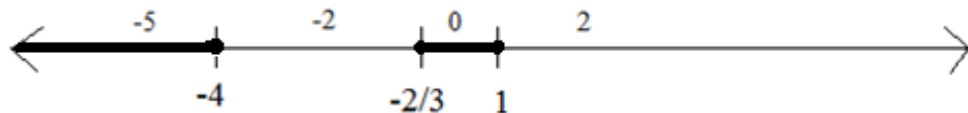
Already Done

- Find the zeros of the non-zero side:
 - Solve $(3x + 2)(x + 4)(x - 1) = 0$
 - $\{-2/3, -4, 1\}$
- Use the zeros as cut-points to define possible solution intervals.



Solve the Inequality $(3x + 2)(x + 4)(x - 1) \leq 0$

- Choose a number from each interval and determine if it is a solution to the inequality by plugging it into the original expression.



$$(3(-5) + 3)((-5) + 4)((-5) - 1) \leq 0 \Rightarrow (-12)(-1)(-6) \leq 0 \Rightarrow \text{True}$$

$$(3(-2) + 3)((-2) + 4)((-2) - 1) \leq 0 \Rightarrow (-3)(2)(-3) \leq 0 \Rightarrow \text{False}$$

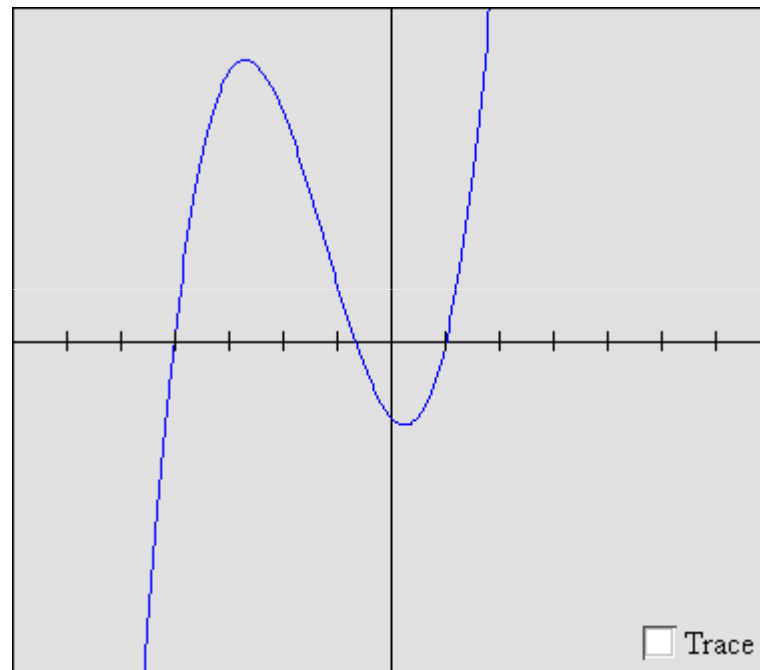
$$(3(0) + 3)((0) + 4)((0) - 1) \leq 0 \Rightarrow (3)(4)(-1) \leq 0 \Rightarrow \text{True}$$

$$(3(2) + 3)((2) + 4)((2) - 1) \leq 0 \Rightarrow (9)(6)(1) \leq 0 \Rightarrow \text{False}$$

$$\text{Solution Set} = (-\infty, -4] \cup \left[-\frac{2}{3}, 1\right]$$

Solve the Inequality $(3x + 2)(x + 4)(x - 1) \leq 0$

Graph $f(x) = (3x + 2)(x + 4)(x - 1)$ Where is $f(x) \leq 0$?



$$\text{Solution Set} = (-\infty, -4] \cup \left[-\frac{2}{3}, 1\right]$$