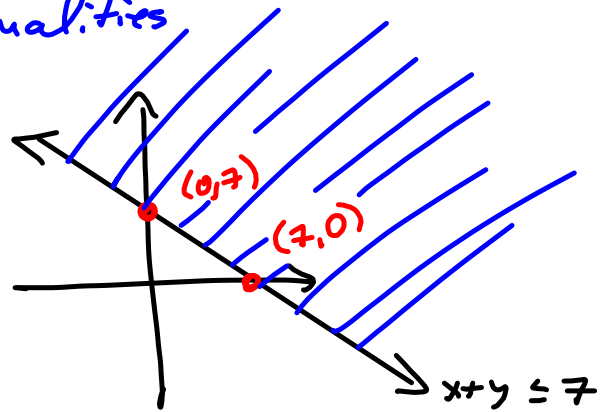


Graphing Inequalities

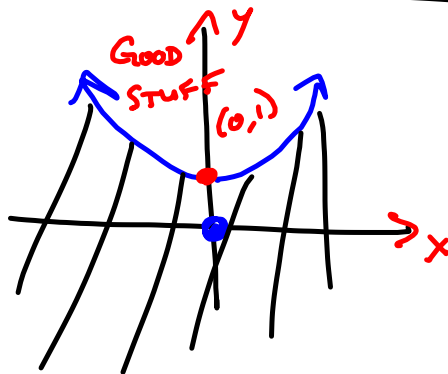
$x + y \leq 7$

| | |
|---|---|
| x | y |
| 0 | 7 |
| 7 | 0 |

 Test
 $(0,0)$
 $0 \leq 7?$
 Yes
 $(0,0)$ Good
 Tarzan Like.



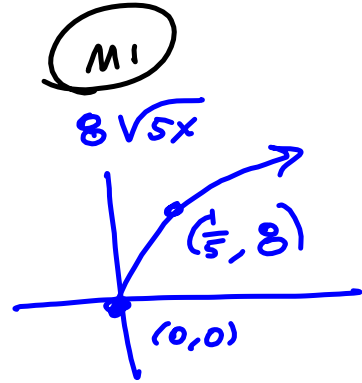
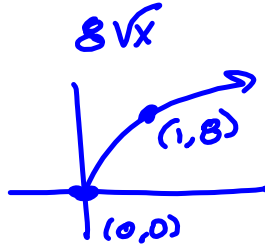
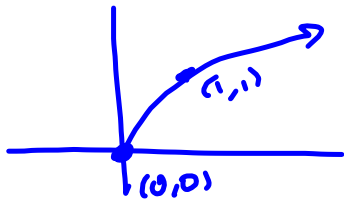
$1 + x^2 \leq y$
 $y \geq x^2 + 1$
 $0 \geq 1?$
 No.
 $(0,0)$ bad



S1.3 old-school graphing

$$8\sqrt{5x+10} - 7$$

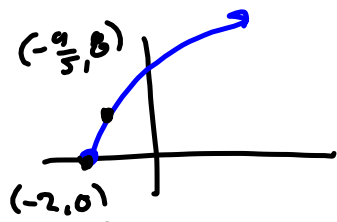
① \sqrt{x}



$af(x) :$
 $(x,y) \mapsto (x, ay)$

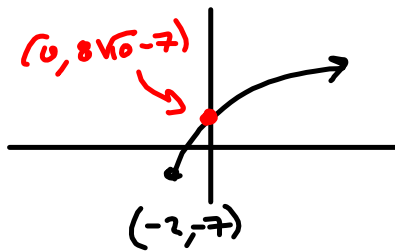
$f(bx) :$
 $(x,y) \mapsto (\frac{1}{b}x, y)$

$\frac{1}{5} - 2 = \frac{1-10}{5}$
 $= 8\sqrt{5(x+2)}$



$f(x+2) :$
 $(x,y) \mapsto (x-2, y)$

$$8\sqrt{5(x+2)} - 7$$

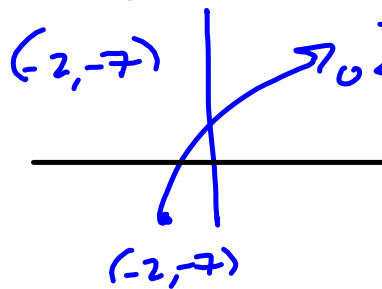


$f(0) =$
 $8\sqrt{10} - 7$

$$8\sqrt{5x+10} - 7$$

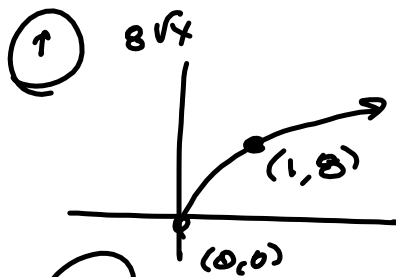
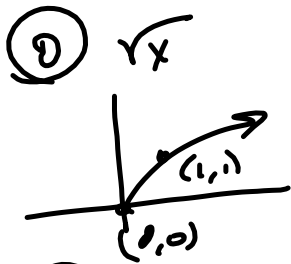
$5x+10=0$
 $5x=-10$
 $x=-2$

Starts @

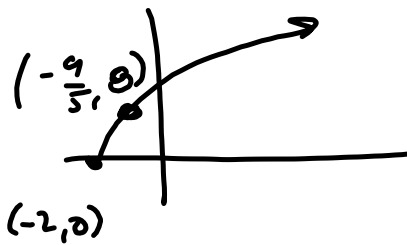
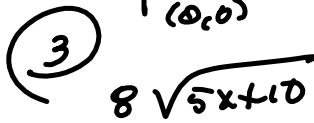
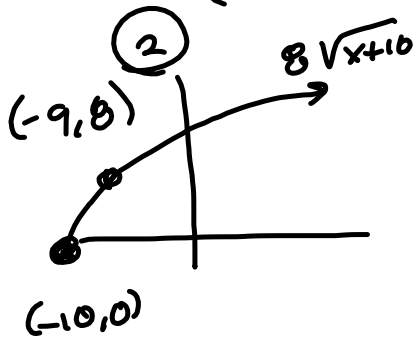


$f(0) =$
 $0 < 8\sqrt{10} - 7$, so
 x-axis is below
 y-intercept.

M2



M2 swaps
steps ② & ③

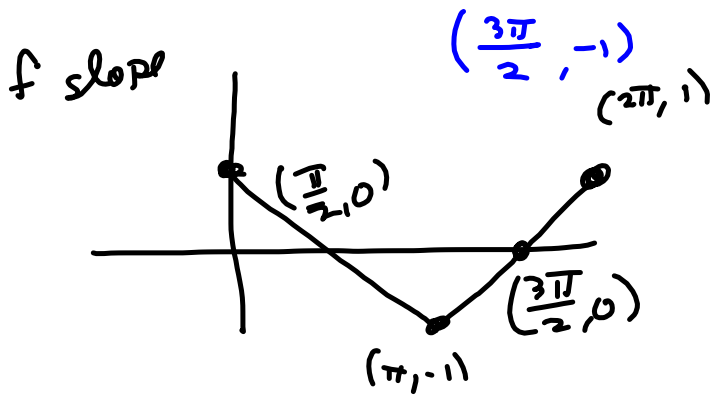
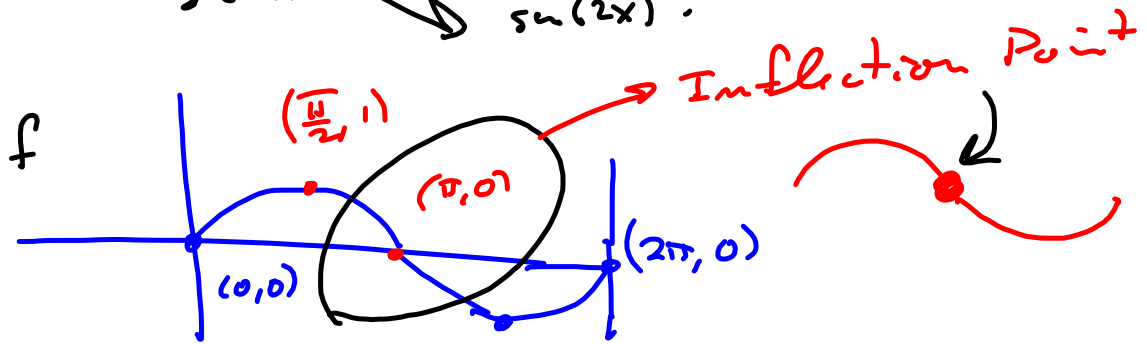


④ $8\sqrt{5x+10} - 7$

See previous

$\sin(2x)$

$\sin 2x = \begin{cases} (\sin(2))x? \\ \sin(2x)? \end{cases}$



Graph of the SLOPE of f .