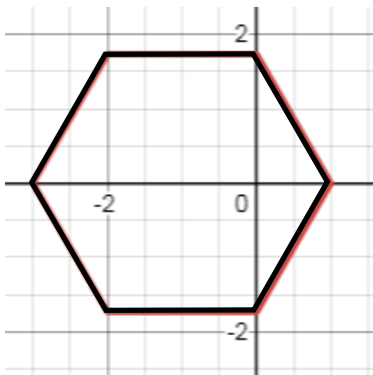
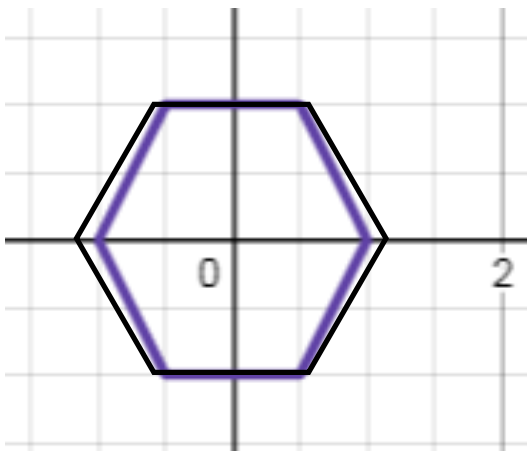


## Graphs of a regular hexagon

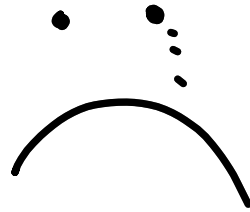


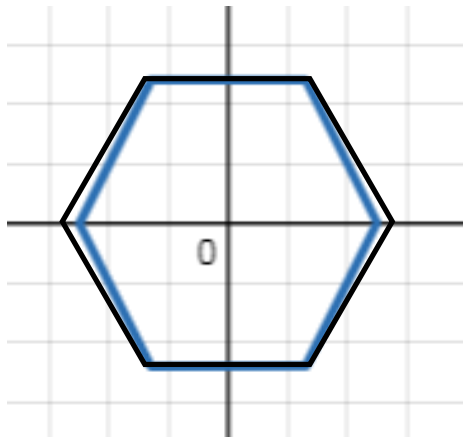
$$\left| \frac{\sqrt{3}}{2}x + \sqrt{3} \right| + \left| \frac{\sqrt{3}}{2}x \right| + |y| = 2\sqrt{3}$$



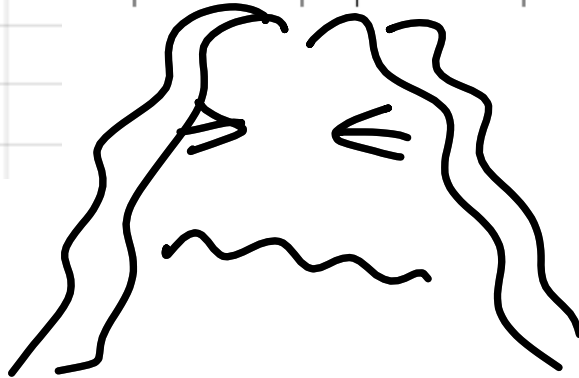
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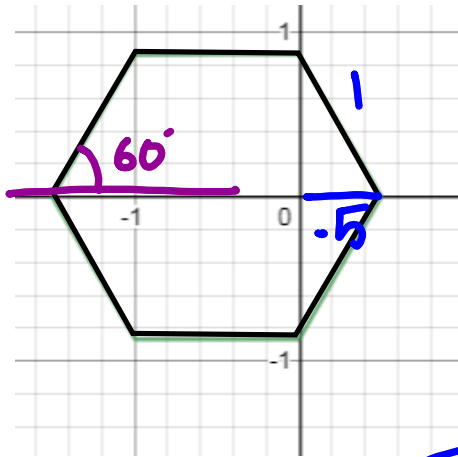
$$|x - 0.5| + |x + 0.5| + |y| = 2$$





$$\left| \frac{3\sqrt{3}}{2} + x \right| + \left| x - \frac{3\sqrt{3}}{2} \right| + |y| = 10$$





$$|2y| + |\sqrt{3}x + \sqrt{3}| + |\sqrt{3}x| = 2\sqrt{3}$$

$$\begin{array}{c} 2 \\ \nearrow \\ 60^\circ \\ \searrow \\ 1 \end{array} \sqrt{3} \rightarrow \text{slope} = \sqrt{3}$$

$$|2y| + |\sqrt{3}x + a| + |\sqrt{3}x| = b$$

$$\begin{array}{l} x = -1 \Rightarrow 0 \\ a = \sqrt{3} \end{array}$$

$$|2y| + |\sqrt{3}x + \sqrt{3}| + |\sqrt{3}x| = b$$

$$\hookrightarrow (.5, 0)$$

$$0 + |\sqrt{3}(.5) + \sqrt{3}| + |\sqrt{3}(.5)| = b$$

$$2\sqrt{3} = b$$

piecewise function

$$f(x) = 2x - 1 \rightsquigarrow f(x) = \begin{cases} 2x - 1, & x \geq 4 \\ 2x - 1, & 0 < x < 4 \\ 2x - 1, & x \leq 0 \end{cases}$$

ex) Parking

$$f(t) = \begin{cases} 10, & 0 < t \leq .5 \\ 20t, & .5 < t \leq 5 \\ 110, & 5 < t \end{cases}$$

tickets

$$P(a) = \begin{cases} 0, & a \leq 2 \\ 10, & 2 < a \leq 17 \\ 15, & 17 < a \leq 99 \end{cases}$$

$$f(x) = [x]$$

"greatest integer function"

f is equal to the greatest integer, less than, or equal to x.



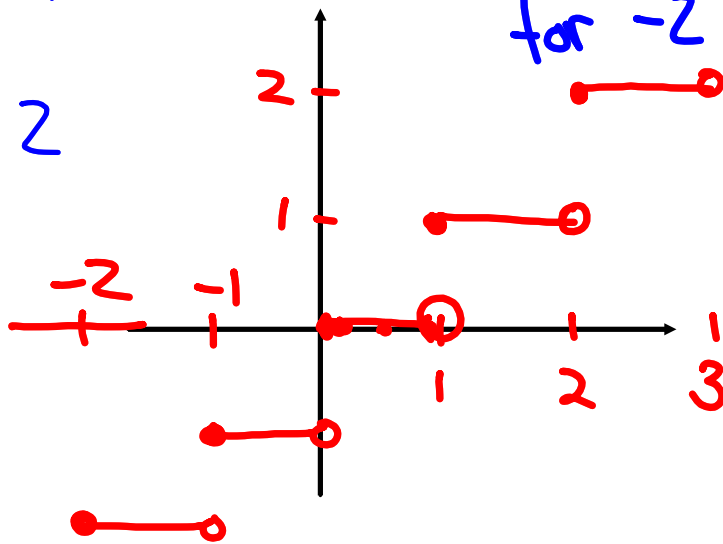
$$[1.3] = 1$$

$$[1.999] = 1$$

$$[2] = 2$$

Sketch  $f(x) = [x]$

for  $-2 \leq x \leq 3$



x	f
0	0
1	0
1.5	0
1.99	0
2	1
2.5	1
2.9	1