## GRAPHING INEQUALITIES

Can you color inside the lines? Then you can graph inequalities!


Graph the following inequalities.
1)

$$
f(x) \geq-2 x+5
$$

$$
\text { slope }=-2
$$

$$
y \text {-int. }=5
$$


3) $x+4 y>20$
$4 y>-x+20$
$y>-x / 4+5$

2)
$y<\frac{2}{3} x-4$
slope $=2 / 3$,
$y$-int. $=-4$

4) $1-2 y \geq 7$

$$
\begin{aligned}
& -2 y \geq 6 \\
& y \leq-3
\end{aligned}
$$



Graph the absolute value inequalities. Victory is yours!
5)

$$
y>|x-2|+1 \quad \text { vertex }=(2,1)
$$


6) $y \geq-3|x-1|$
vertex $=(1,0)$


What happens if there is no "above or below" to shade?
7) $\frac{3}{2} x<-6$

Solve for $x$ first by mult. both sides by $2 / 3$
$x<-4$ No " $y$ " means a vertical line @-4

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| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\\|$ |  |  |  |  |  |  |  |
| $u$ |  |  |  |  |  |  |  |
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