Algebra 2 2.7-2.8
Quiz tomorrow 2.7-2.8

Test Wed. Ch. 2

linear $< > \leq \geq$

nonlinear
↑
contin.

(non) linear programming

BOOKS Spencer has saved $96 for a trip to his favorite bookstore. Each paperback book costs $8 and each hardback book costs $12. Write and graph an inequality that shows the number of paperback books and hardback books Spencer can purchase.

optimize solution(s)

$24 + 72 \leq 96$ (8·3, 12·8)

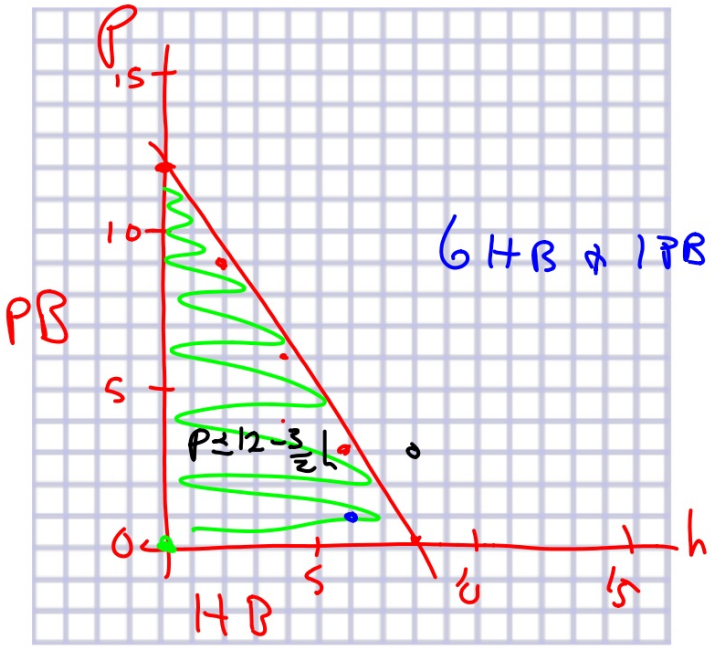
$8p + 12h \leq 96$

$0 + 0 \leq 96$

$\frac{8p}{8} \leq \frac{96}{8} - \frac{12h}{8}$

$p \leq 12 - \frac{3}{2}h$

8H 3P



$x - 3y = 6$

2-8 Graphing Linear and Absolute Value Ineq

Graph each inequality.

54. $x - 3y < 6$

$-x \quad -x$

$-3y < -x + 6$

$\frac{-3y}{-3} < \frac{-x}{-3} + \frac{6}{-3}$

$y > \frac{1}{3}x - 2$

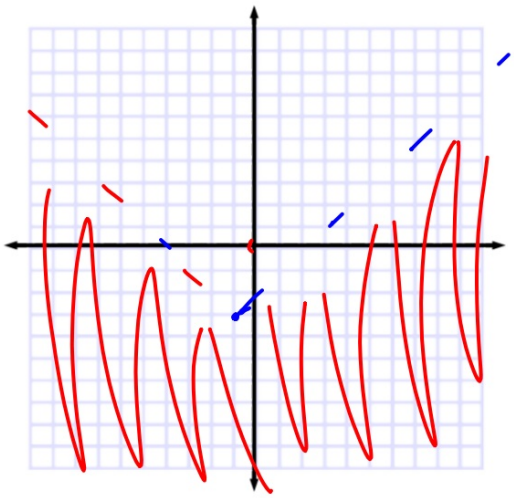
55. $y \geq 2x + 1$

60. $y + 3 < |x + 1|$

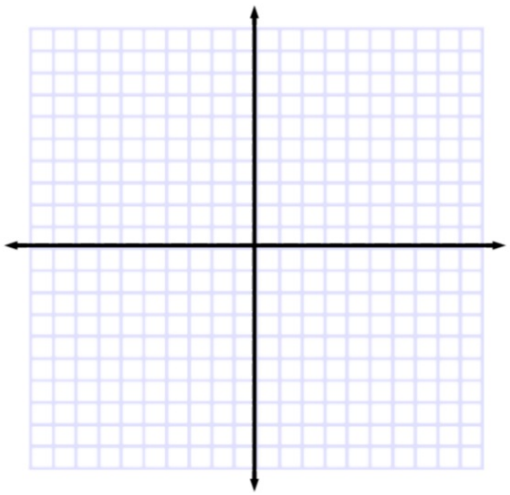
$0 + 3 < |0 + 1|$

$3 < |1|$

$3 < 1$



61. $2y \leq |x - 3|$



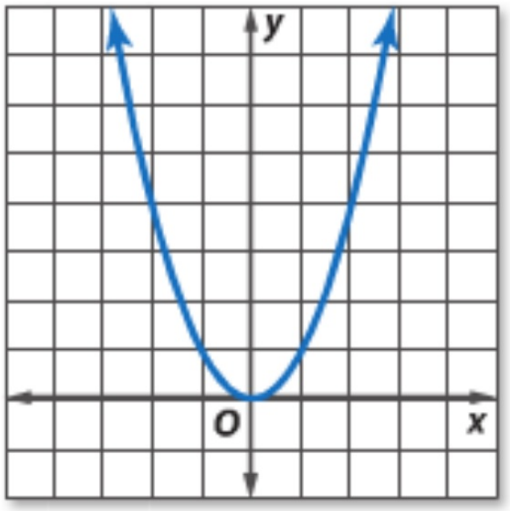
51. Describe the translation in $y = x^2 - 3$.

52. Describe the reflection in $y = -x^2$.

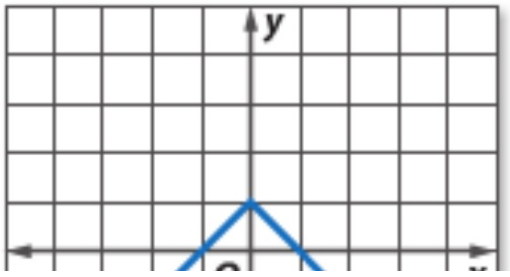
2-7 Parent Functions and Transformations

Identify the type of function represented by each graph.

49.



50.



$2y < |4x-8|$

Solve for y

Compare to parent graph (Desmos)

$y = \frac{1}{2}|4x-8|$

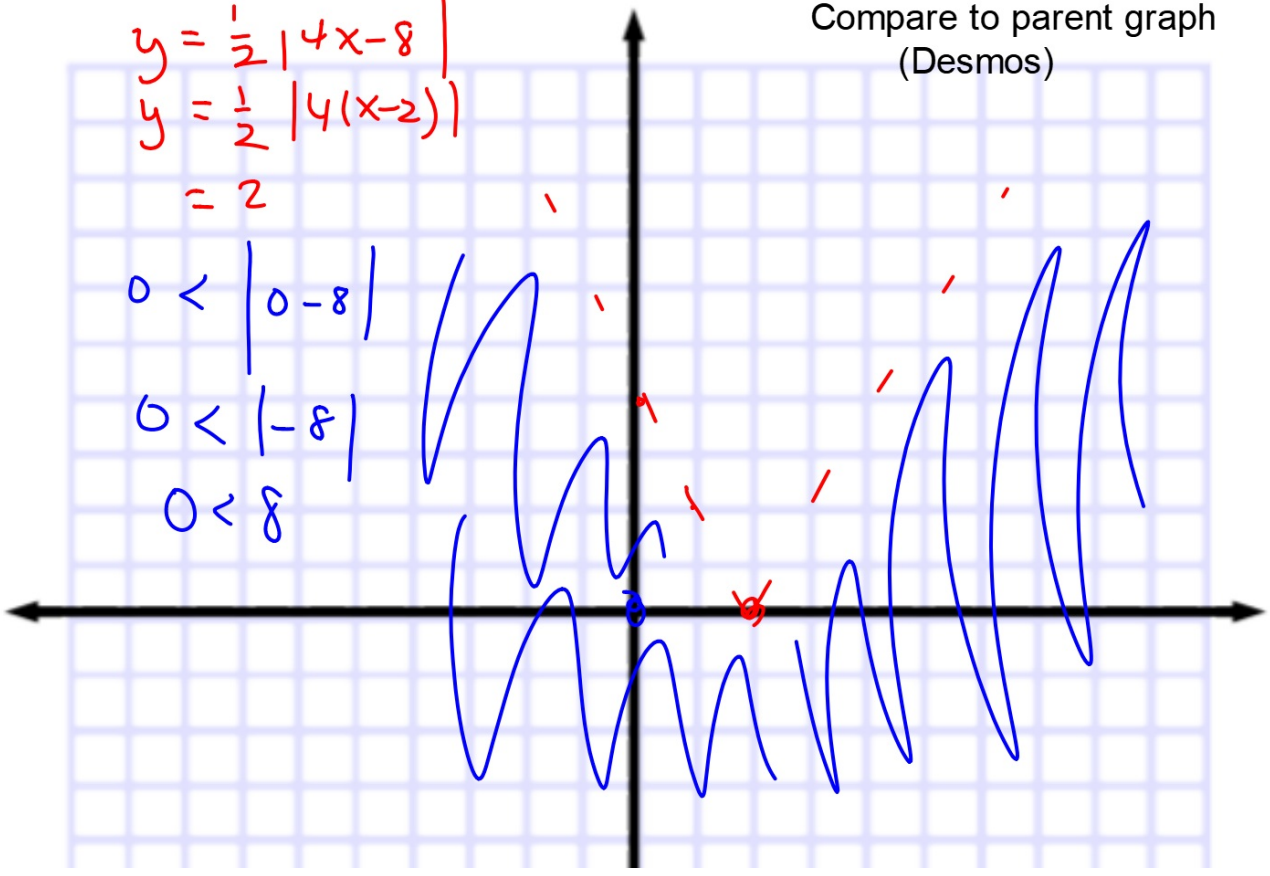
$y = \frac{1}{2}|4(x-2)|$

$= 2$

$0 < |0-8|$

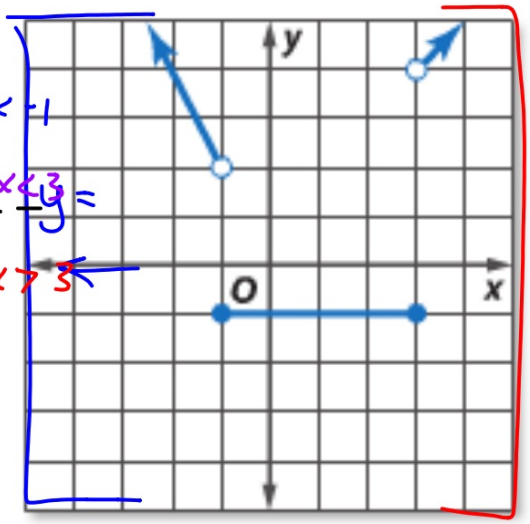
$0 < |-8|$

$0 < 8$



15. Write the piecewise-defined function shown.

$f(x)$ $\begin{cases} -2x + 0 \text{ if } x < -1 \\ -1 \text{ if } -1 < x < 3 \\ x + 1 \text{ if } x > 3 \end{cases}$

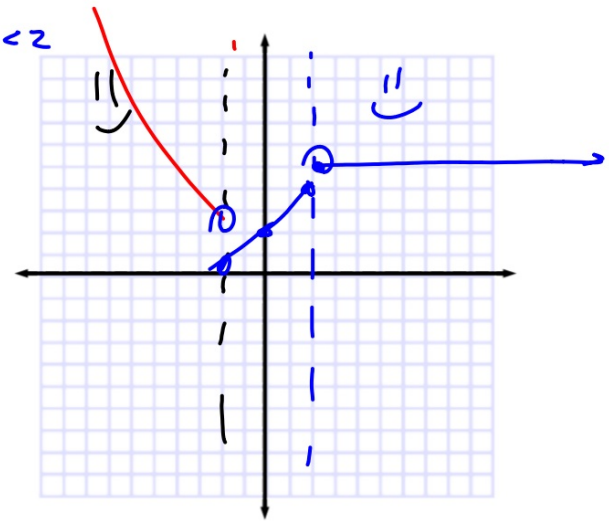


14. Graph $f(x) = \begin{cases} -x \text{ if } x < -2 \\ x + 2 \text{ if } -2 \le x \le 2 \\ 5 \text{ if } x > 2 \end{cases}$.

$y = -x$ if $x < -2$

$y = x + 2$ $-2 < x < 2$

$y = 5$



WB 2.8