

Algebra 2 2.7-2.8

Quiz tomorrow 2.7-2.8

Test Thurs. Ch. 2

PB \$8 HB 12

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.

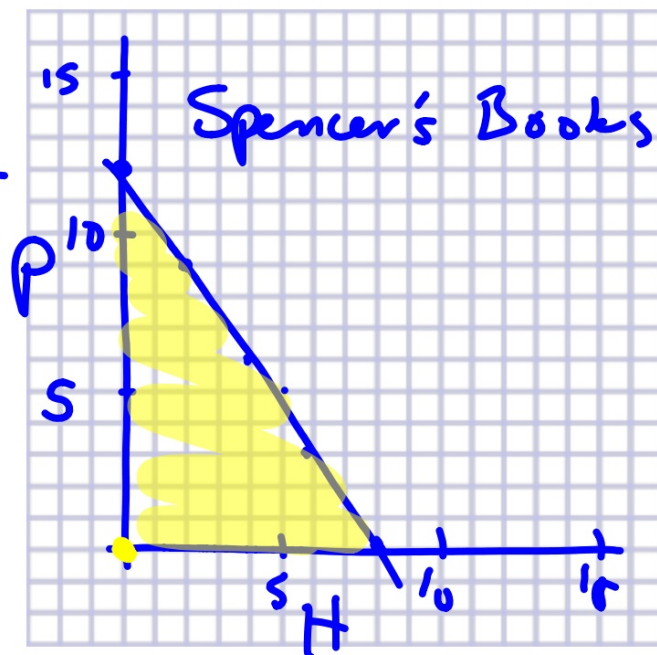
$-\frac{3}{2}$

$$12h + 8p \leq 96$$

$$-12h \quad 60 + 40 < 9 \quad -12h$$

$$8p = -12h + 96$$

$$p = -1.5h + 12$$



2-8 Graphing Linear and Absolute Value Inequalities

Graph each inequality.

54. $-3y < 6$

$$\frac{-3y}{-3} \frac{-3}{-3}$$

$$y > -2$$

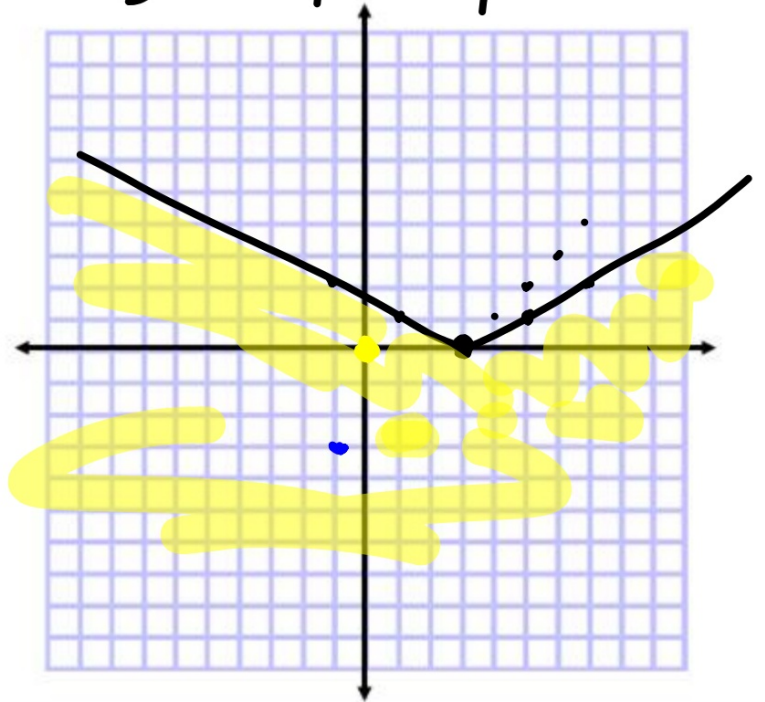
55. $y \geq 2x + 1$

$$\begin{array}{l} < > \text{---} \\ \leq \geq \text{---} \end{array}$$

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

$y = |x + 1| - 3$
 $3 < 1$

61. $2y \leq |x - 3|$ $\frac{1}{2} \cdot 2y = \frac{1}{2}|x - 3|$
 $0 \leq |3|$
 $0 \leq 3$ $y = \frac{1}{2}|x - 3|$



51. Describe the translation in $y = x^2 - 3$. Same shape as p.9. translate down 3

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

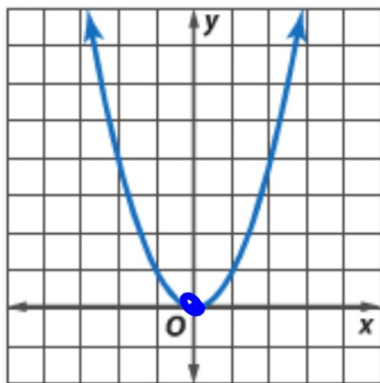
Same shape as p.9. reflected over x-axis

$$(-x)^2$$

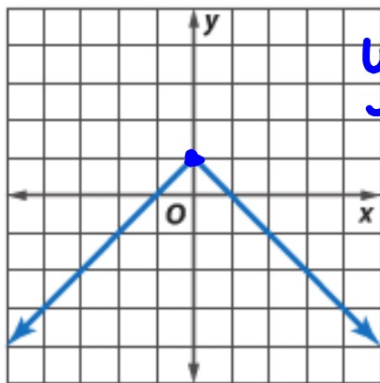
2-7 Parent Functions and Transformations

Identify the type of function represented by each graph.

49.



50.



$$y = -|x| + 1$$

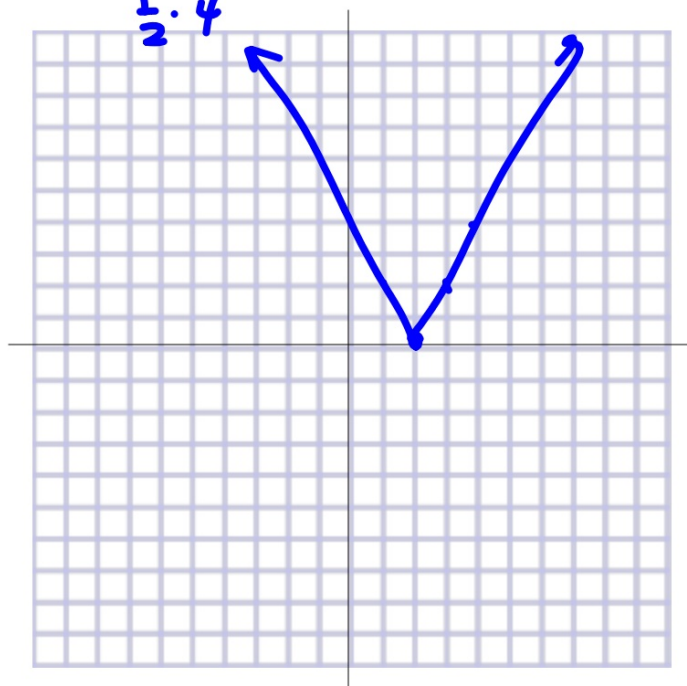
$$y > \frac{1}{2} |3x - 6|$$

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

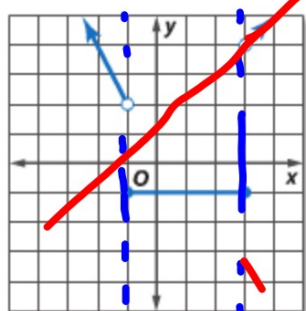
$$2y < |4x - 8|$$

$$\frac{1}{2} \cdot 4$$

Solve for y
Compare to parent graph
(Desmos)



15. Write the piecewise-defined function shown.



$x = -1$ $x = 3$

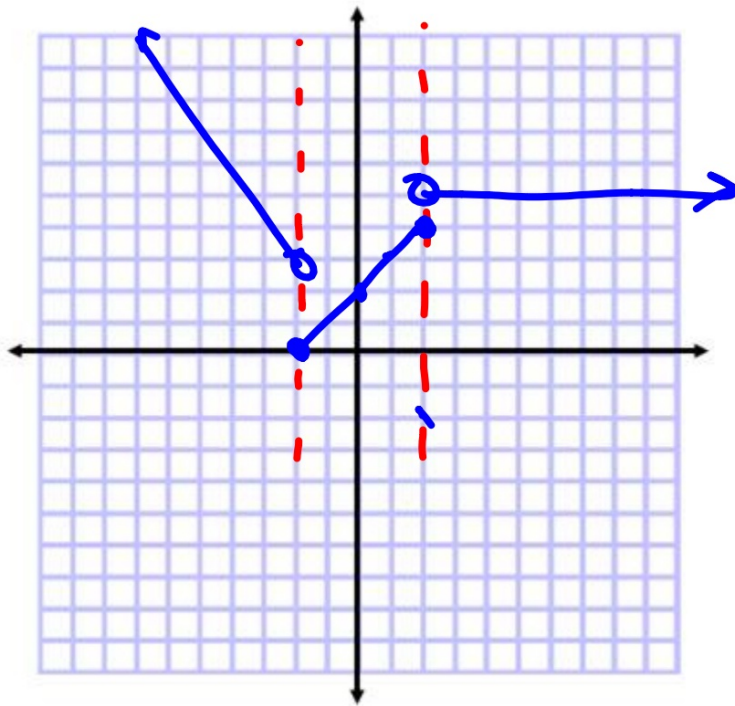
$$f(x) = \begin{cases} -2x + 1 & \text{if } x < -1 \\ -1 & \text{if } -1 \leq x \leq 3 \\ x + 1 & \text{if } x > 3 \end{cases}$$

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

$$y = -x$$

$$y = x + 2$$

$$y = 5$$



WB 2-8 pr.