

Algebra 2 2.8

\* Graph linear inequalities\*

Graph absolute value inequalities

linear function

absolute value function

inequality

boundary (open or closed)

test point (shade where the test point is TRUE)

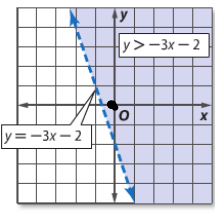
Solution: where is it true for ALL?

whiteboards

\*Algebra 1

$y > -3x - 2$

$0 > -2$



1. graph boundary
2.  $\geq \leq$  solid  
 $> <$  open
3. test pt.
4. Shade T

Quiz 2.5-2.7 (0,0)

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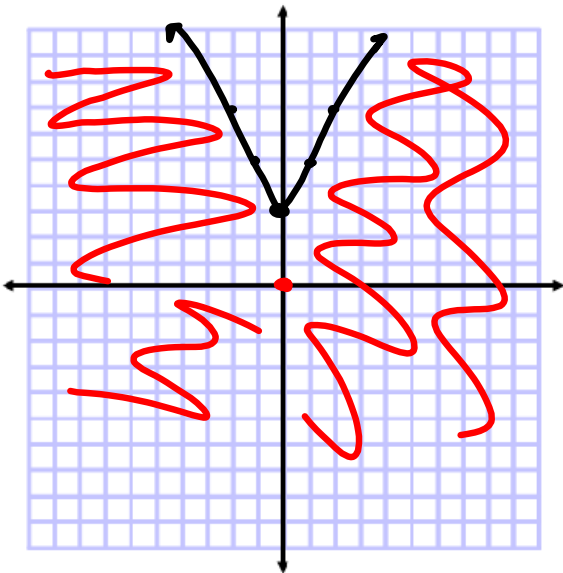
Guided Practice

3A. Graph  $y \leq 2|x| + 3$ .

$y = 2|x| + 3$

$0 \leq 2|0| + 3$

$0 \leq 3$



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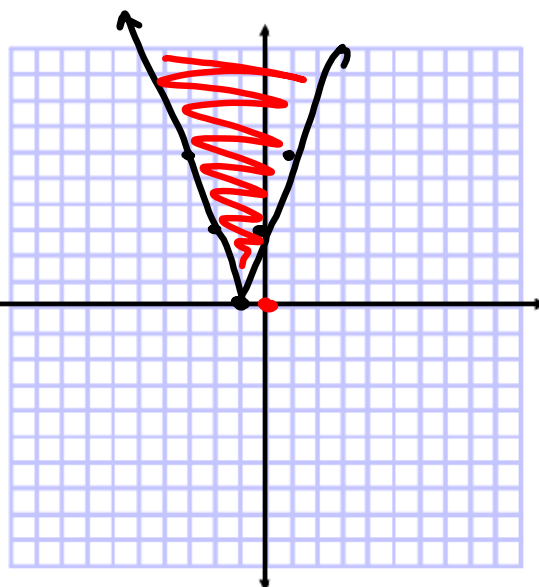
3B. Graph  $y \geq 3|x + 1|$ .

$0 > 3|0+1|$

$0 > 3 \cdot 1$

$0 > 3$

~~A~~  
 $a - 2 \cdot 70$   
 $39 - 5 \cdot 70$



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**Real-World Example 2** Solid Boundary

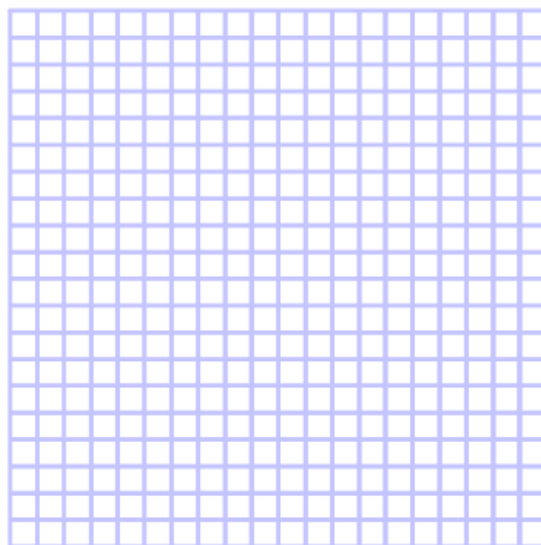


**RECREATION** A recreation center offers various 30-minute and 60-minute art classes. The recreation director has allotted up to 20 hours per week for art classes.

hint: 30 min = .5 hours

60 min = 1 hour

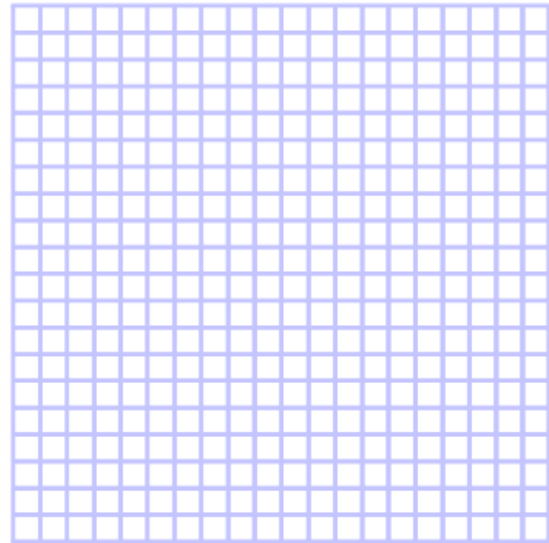
- a. Write an inequality to represent the number of classes that can be offered per week. Graph the inequality.
- b. Can the recreation director schedule 25 of the 30-minute classes and 15 of the 60-minute classes during a given week? Explain your reasoning.



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5. **CCSS MODELING** Gregg needs to buy gas and oil for his car. Gas costs \$3.45 a gallon, and oil costs \$2.41 a quart. He has \$50 to spend.

- a. Write an inequality to represent the situation, where  $g$  is the number of gallons of gas he buys and  $q$  is the number of quarts of oil.
- b. Graph the inequality.
- c. Can Gregg buy 10 gallons of gasoline and 8 quarts of oil? Explain.



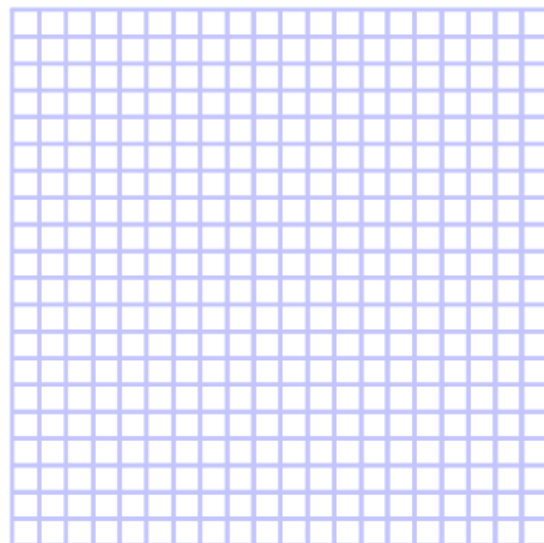
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21. **SCHOOL DANCE** Carlos estimates that he will need to earn at least \$700 to take his girlfriend to the prom. Carlos works two jobs as shown in the table.

- a. Write an inequality to represent this situation.
- b. Graph the inequality.
- c. Will he make enough money if he works 50 hours at each job?

Job	Pay
Main St. Deli	\$8 per hour
Babysitting	\$6 per hour

Remember to define your variables



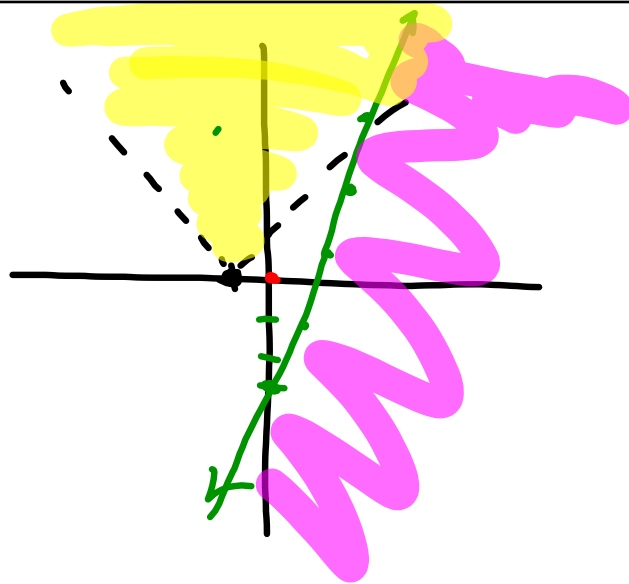
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$$y > |x + 1|$$

$$y \leq 2x - 3$$

$$0 \leq 0 - 3$$

$$0 \leq -3$$



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