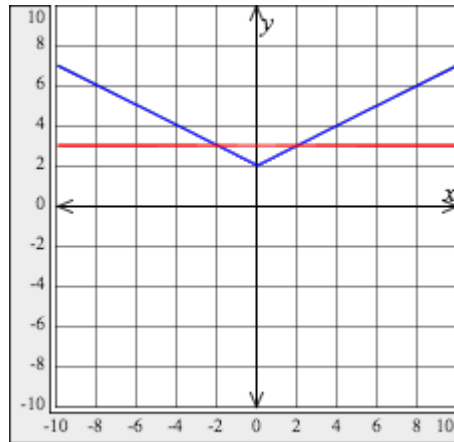


Alg 2 1.7 Homework

Question 1.

Solve the inequality  $\frac{1}{2}|x| + 2 < 3$ . Use the graphs of  $f(x) = \frac{1}{2}|x| + 2$  and  $g(x) = 3$ , shown.



**A.**  $-2 \leq x \leq 2$

**B.**  $x \leq -2$  or  $x \geq 2$

**C.**  $-2 < x < 2$

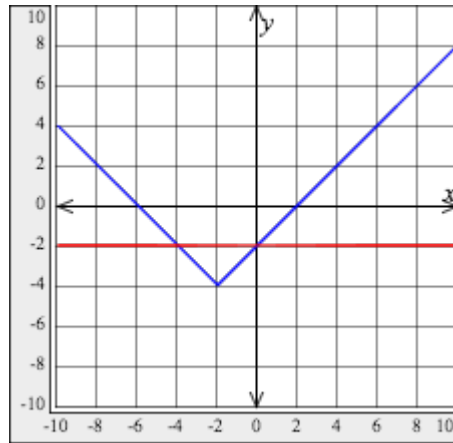
**D.**  $x < -2$  or  $x > 2$

## Alg 2 1.7 Homework

Question 2.

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Solve the inequality  $|x + 2| - 4 \geq -2$ . Use the graphs of  $f(x) = |x + 2| - 4$  and  $g(x) = -2$ , shown.

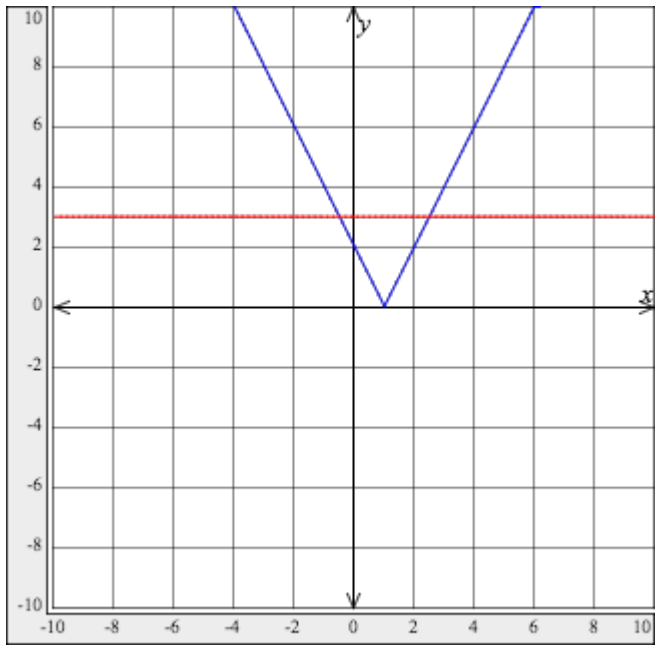


The solution is  $x \leq$   or  $x \geq$  .

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Alg 2 1.7 Homework

Question 3.



Select the absolute value inequality that matches the graph. Then select the solution of the inequality.

- A.**  $2|x - 1| < 3$
- B.**  $2|x + 1| > 3$
- C.**  $2|x| - 1 > 3$
- D.**  $2|x| + 1 < 3$

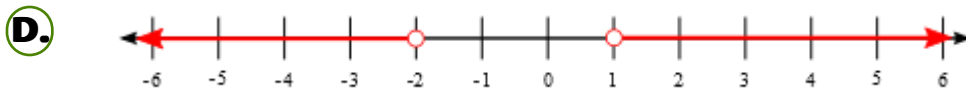
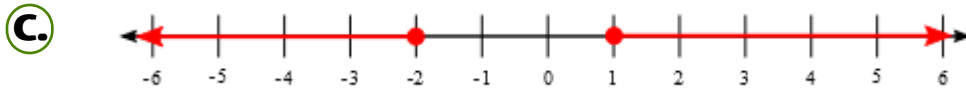
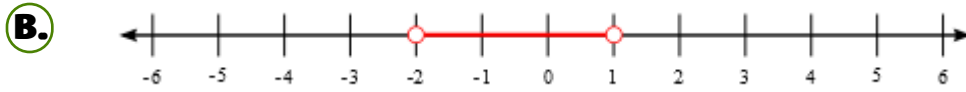
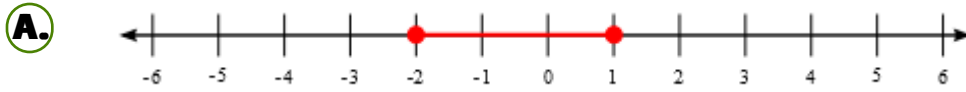
- A.**  $x < -0.5$  or  $x > 2.5$
- B.**  $x > -0.5$  or  $x < 2.5$
- C.**  $-0.5 > x > 2.5$
- D.**  $-0.5 < x < 2.5$

Alg 2 1.7 Homework

Question 4.

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Solve the absolute value inequality  $|2x + 1| - 1 < 2$  algebraically. Select the correct solution.



Alg 2 1.7 Homework

Question 5.

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Solve the absolute value inequality  $|x + 11| - 13 \leq -8$  algebraically. Select the number line showing the correct solution.

