

#2 Algebra II HOMEWORK Quadratic Inequalities

Name _____

1/ /15

1. Solve using tables and a graph:

$x^2 - 6x + 14 > 6$

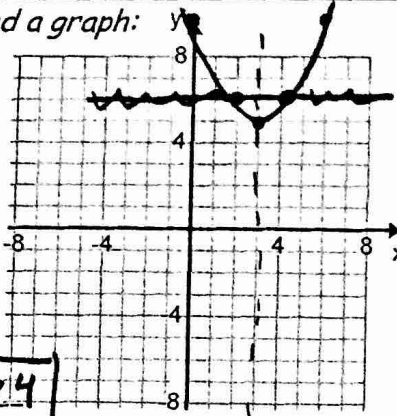
Vertex: (3, 5)

Axis/symm: $x=3$

y-intercept: 14

roots: 2, 4

Solution: $x < 2$ or $x > 4$



2. $-2(x+3)^2 + 1 > -1$

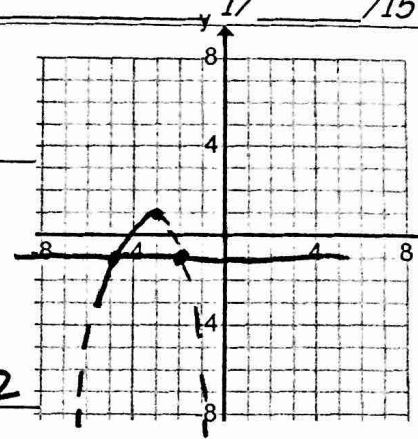
Vertex: (-3, 1)

Axis of symm: $x=-3$

y-intercept: -17

roots: -2, -4

Solution: $-4 < x < -2$



3. Solve: $x^2 + 8x + 15 \leq 3$

Vertex: (-4, -1)

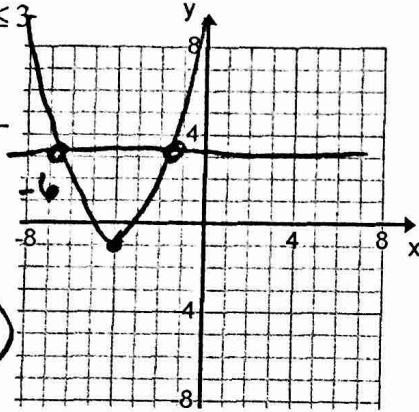
Axis/symm: $x=-4$

y-intercept: 15

roots: -6, -2

Solution:

$-6 \leq x \leq -2$



4. Solve: $-2x^2 + 4x + 6 < 6$

Vertex: (1, 8)

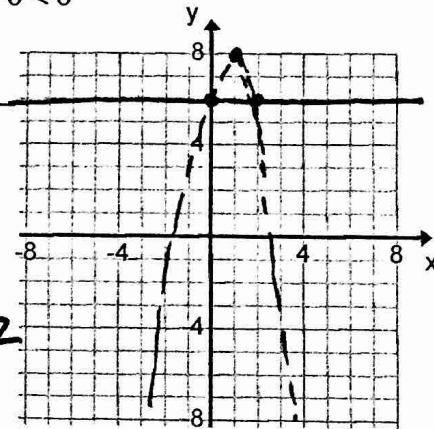
Axis/symm: $x=1$

y-intercept: 6

roots: 0, 2

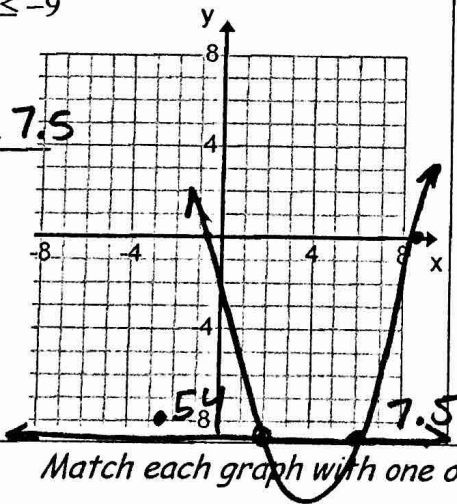
Solution:

$x < 0$ or $x > 2$



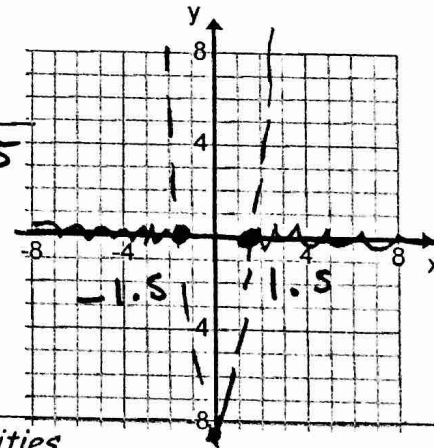
37. Solve: $x^2 - 8x - 5 \leq -9$

Solution: $.54 \leq x \leq 7.5$

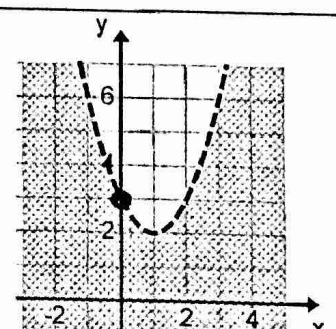
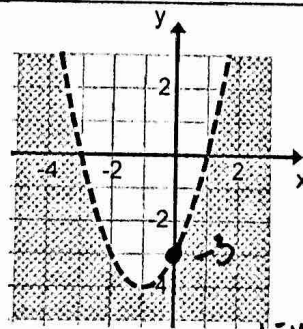
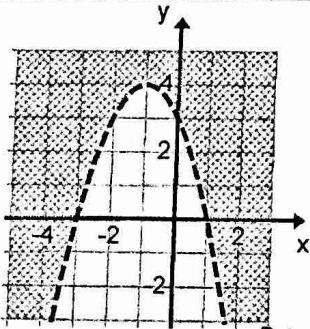


40. Solve: $4x^2 - 9 > 0$

Solution: $x < -1.5$ or $x > 1.5$



Match each graph with one of the following inequalities.



48.

B $-x^2$
A) $y < x^2 + 2x - 3$

49.

A $y_{int} = -3$
B) $y > -x^2 - 2x + 3$

50.

$y_{int} = 3$ **C**
C) $y < x^2 - 2x + 3$