

example

$$2x - 7 \geq 5$$

$$\frac{2x - 7 \leq -5}{+7 \quad +7} \quad \text{or} \quad \frac{2x - 7 \geq 5}{+7 \quad +7}$$

$$\frac{2x \leq 2}{2 \quad 2} \quad \frac{2x \geq 12}{2 \quad 2}$$

$$x \leq 1 \quad \text{or} \quad x \geq 6$$

Sep 29-10:12 AM

Solving quadratic inequalities

Find the x-intercepts

Test to find where to shade

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Example

Solve $x^2 + 3x + 2 < 0$.

$$(x + 1)(x + 2)$$

$x = -1 \quad x = -2$ x-intercepts

$x = -3 \quad (-3)^2 + 3(-3) + 2 < 0$
no

$x = -1.5 \quad (-1.5)^2 + 3(-1.5) + 2 < 0$
 $2.25 - 4.5 + 2 < 0$
 $-.25 < 0$
yes

$x = 0 \quad (0)^2 + 3(0) + 2 < 0$
no

$-2 < x < -1$

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HW

p64 #5, 7, 9, 11

p66 1, 5, 13, 17, 19, 23,
32, 34, 37-80

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