8.3 Quiz Solving Systems

Feb 28-8:54 AM

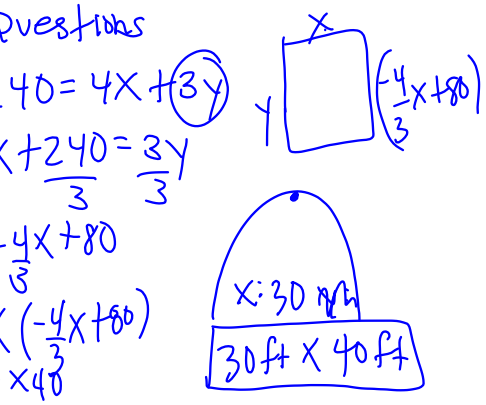
8.3 Questions

(15) $240 = 4x + 3y$

$-\frac{4}{3}x + 80 = y$

$A = x(-\frac{4}{3}x + 80)$

30×40



x: 30 yds

30ft x 40ft

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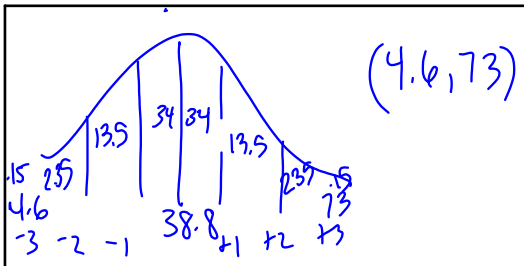

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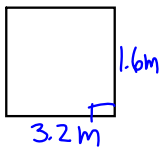
March Calendar Math

Square/Rectangle



Perimeter: add all the sides

$2l + 2w$

$2(1.6) + 2(3.2) = 9.6m$

Area: $l \cdot w$ bh

$3.2 \cdot 1.6 = 5.12m^2$

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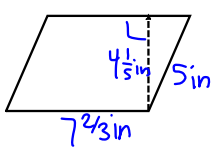
Parallelogram



Perimeter:

$2l + 2w$

$2(5) + 2(7\frac{2}{3}) = 25\frac{1}{3}$in

Area: bh

$(7\frac{2}{3})(4\frac{1}{5}) = 32\frac{1}{5}in^2$

Mar 10-9:57 AM

8.4 Solving Inequalities

Solving inequalities algebraically is determining where the function is positive or negative.

open $< >$ circle

closed $\leq \geq$ circle

( ) [ ]

below x-axis < 0

above x-axis > 0

Denominators are always excluded values

Parenthesis

Steps:

1. Solve for x
2. number line
3. Sign chart
4. determine pos/neg

Write answer in interval notation

Feb 28-8:54 AM

Solve $(x-2)\sqrt{x+3} \geq 0$ using +

$x-2=0 \quad x+3 \geq 0$

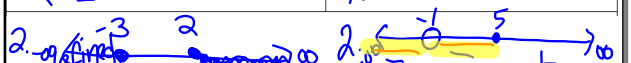
$+2+ \quad -3 \quad -3$

$x=2 \quad x \geq -3$

Solve $\frac{x-5}{|x+1|} \geq 0$ using −

$x-5=0 \quad x+1=0$

$x=5 \quad x=-1$

2. 

3. plug in −1: $(-1-2)\sqrt{-1+3} \geq 0$, $-4.2 \geq 0$

4. $\{3\} \cup [2, \infty)$

plug in 3: $(3-2)\sqrt{3+3} \geq 0$, $2.4 \geq 0$ yes

3. looked at graph

4. $(-\infty, -1) \cup (-1, 5]$

Feb 28-8:55 AM

The length of a rectangle is five more than twice the width. If the area is at least 75 square centimeters, what are the possible values for the width?

$L = 2w+5$

$w =$

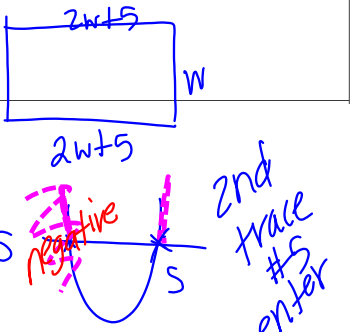
$A = L \cdot w$

$A \geq 75$

$w(2w+5) \geq 75$

$2w^2+5w \geq 75$

$[5, \infty)$



2nd trace #5 enter

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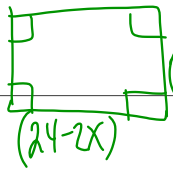
A packaging company is designing a new open-topped box with a volume of at least $512 in^3$. The box is to be made from a piece of cardboard measuring 24 inches by 24 inches by cutting identical squares from the corners and turning up the sides. Describe the possible lengths of the sides of the removed squares.



$V \geq 512$

$(24-2x)(24-2x)x \geq 512$

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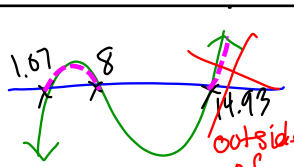

$[1.07, 8]$

$D: (0, 12)$

Mar 6-1:53 PM

The amount you cut off for the squares is between 1.07 in and 8 inches to yield an volume at least $512 in^3$

Mar 10-10:38 AM