The sheet on your table is an example of what a quality homework assignment might look like.

(when working on problems with a process)

HW Tally

After looking this over, return it to the front desk and then

Pick up the Warm Up and do both sides

Pick Up the Warm Up

HW Help

1 Solve for **m** (in other words, re-arrange the equation to isolate m)

$(3)\,n = \frac{7}{3}m - 10(3)$ or $n + 10 = \frac{7}{3}m$

Clear out the fractions ASAP

$3n = 7m - 30$
$+30 \quad +30$

$\frac{7m}{7} = \frac{3n+30}{7}$

$m = \frac{3n}{7} + \frac{30}{7}$ $\quad m = \frac{3n+30}{7}$

2 Find the error in the solution at right. Explain what the error is and solve the equation correctly. Be sure to check your answer.

$\frac{5}{x} = x - 4$
$x \cdot \frac{5}{x} = x - 4$
$5 = x - 4$
$x = 9$

$(x)\frac{5}{x} = x(x) - 4(x)$

$5 = x^2 - 4x$
$-5 \quad\quad -5$

$0 = x^2 - 4x - 5$

$0 = (x+1)(x-5)$
ZPP

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

$0 = x^2 - 4x - 5$

$0 = (x+1)(x-5)$

$y = x^5 - 18$

y-int

$(0, y)$

$y = 0^5 - 18$

$= -18$

$(0, -18)$

x-int

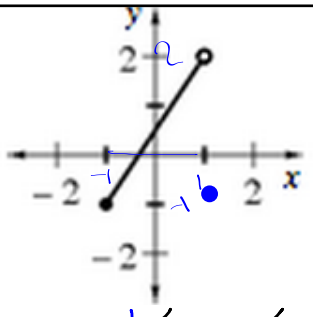
$(x, 0)$

$x^5 - 18 = 0$

$\sqrt[5]{x^5} = \sqrt[5]{18}$

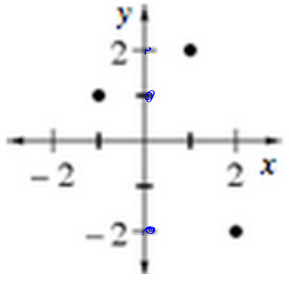
$x =$

3



Domain: $-1 \leq x < 1$

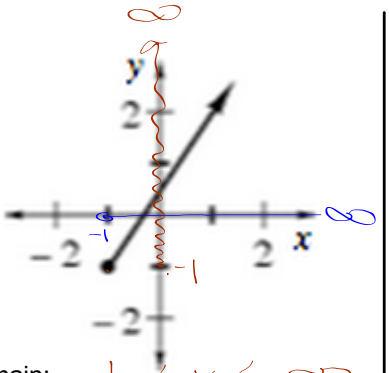
Range: $-1 \leq y < 2$



Domain: $-1, 1, 2$

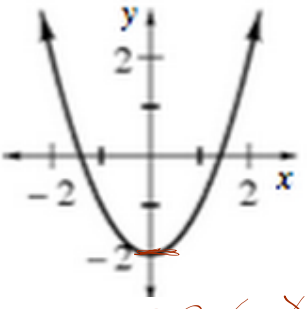
Range: $-2, 1, 2$

ARN



Domain: $-1 \leq x < \infty$

Range: $-1 \leq y < \infty$



Domain: $-\infty < x < \infty$

Range: $-2 \leq y < \infty$

(3) Show how to find the y-axis intercept AND x-axis intercept(s) algebraically of the following function. when you are done, you can check with your calculator.

$$y = x^5 - 18$$

x-intercept

Set $y = 0$

$x^5 - 18 = 0$

$x^5 = 18$

y-intercept

Set $x = 0$

(4)

Making "ONES"

$\frac{5}{5} = 1$ $\quad \frac{x}{x} = 1$ $\quad \frac{x \cdot x}{x \cdot x} = 1$ $\quad \frac{x^2}{x^2} = 1$ $\quad \frac{4n^3}{n^3} = \frac{4}{1}$

(4)

$\frac{n \cdot n \cdot n}{n \cdot n} = n$ $\quad \frac{n^3}{n^2} = n$ $\quad \frac{m^6 b^2}{m^2 b^2} = m^4$

$\frac{n^2}{n^3} = \frac{1}{n}$

$\frac{z \cdot z \cdot z}{z \cdot z \cdot z \cdot z z} = \frac{1}{z^2}$ $\quad \frac{z^3}{z^5} = \frac{1}{z^2}$ $\quad \frac{10x}{3x^2} = \frac{10}{3x}$

$n^2 \cdot \frac{n^{502}}{n^{500}} = n^2$ $\quad \frac{x^{100}}{x^{20} \cdot x^{120}} = \frac{1}{x^{20}}$

(5) There are seven exponent "laws", two of which can be tricky.

$\frac{a^m}{a^n} = a^{m-n}$ and $(ab)^m = a^m b^m$

$\frac{x^5}{x^3} = x^{5-3} = x^2$ or just make "ones" instead $\frac{x^5}{x^3}$

$\frac{a^4}{a^6} = a^{-2} = \frac{1}{a^2}$ or just make ones instead $\frac{a^4}{a^6} =$

$\frac{4x^1y^2t}{5mx^4x^3} =$

$(5x^3)^2 = (5)^2 \cdot (x^3)^2$

$25x^6$

$(-2m^3)^3 =$

$(2n^2m)^4 = 2^4 (n^2)^4 m^4 = 16n^8m^4$

$(-3n^2e^3)^2 =$

$(-3)^2 \cdot (n^2)^2 \cdot (e^3)^2$

$9n^4e^6$

Your LCQ's will be passed back from yesterday

Use the results as an opportunity to learn something little or something big that you don't know how to do.

There will be one copy of the solutions near each table.

This copy will be collected along with your LCQ at the end of the

Learning from your LCQ you took on Friday.

first a few thoughts

We learn from mistakes.

So, mistakes on homework and small LCQ's are not a bad thing as long as...

In a moment, I'll give each group a copy of the solutions.

No cell phones out

If you have not taken it, let me know now.

Confusion about $\sqrt{\ }$ $x^2 = 25$

$\sqrt{16} = 4$

$\sqrt{25} = 5$

$\sqrt{x^2} = \sqrt{25}$

$x = \pm 5$

Solutions to equations

$18 = 2x$

$9 = x$

$x = 9$

Same with writing functions

$y = 2x^2 - 3x + 2$ ~~$f(x)$~~

Exact Answers

$(3x-5)(\quad) = 0$

$3x-5=0$

$3x=5$

$x=\frac{5}{3}$

NOT 1.67

$1.\overline{6}$

$\frac{5}{2} = x$

$x=\frac{5}{2}$

$x=2.5$

BB

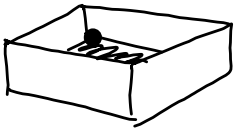
Pencils/Pens down

Goals for today

Generate an algebraic relationship to investigate a geometric relationship arising from a box problem

(1.5 day investigation)

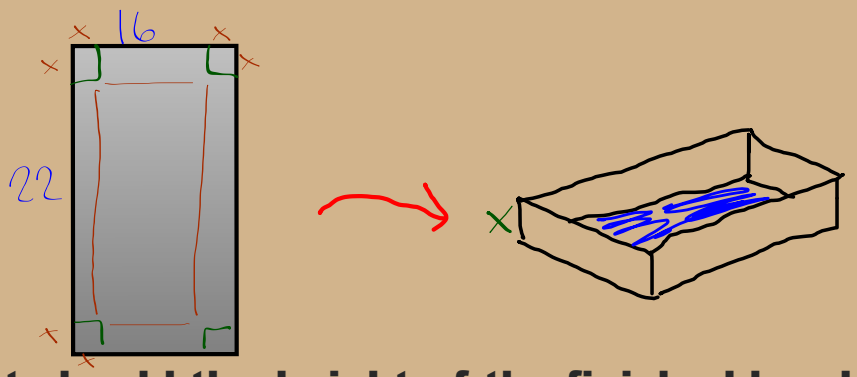
Demo of an Open Top Box being constructed



NOTES

Open Top Box
Volume Function

Designing an open top box, starting from a flat rectangular piece of metal.



What should the <u>height</u> of the finished box be in order to maximize the volume ????

Each pair will be given a paper with dimensions

22cm x 16 cm

Each of you will cut out and make a box, however, everyone will have a different cut out size

1, 2, 3, 4, 5, 6, 7, 8

A) Cut, fold, tape your box

B) Which one will give us the largest volume?

Each person should now calculate the volume of their own.

Purple	1 × 1
White	2 × 2
Cream	3 × 3
Blue	4 × 4
Dark Brown	5 × 5
Light Pink	6 × 6
Dark Pink	7 × 7

cut out (cm)	Volume (cm^3)
1	280
2	432
3	480
4	448
5	~~300~~ 360
6	240
7	112

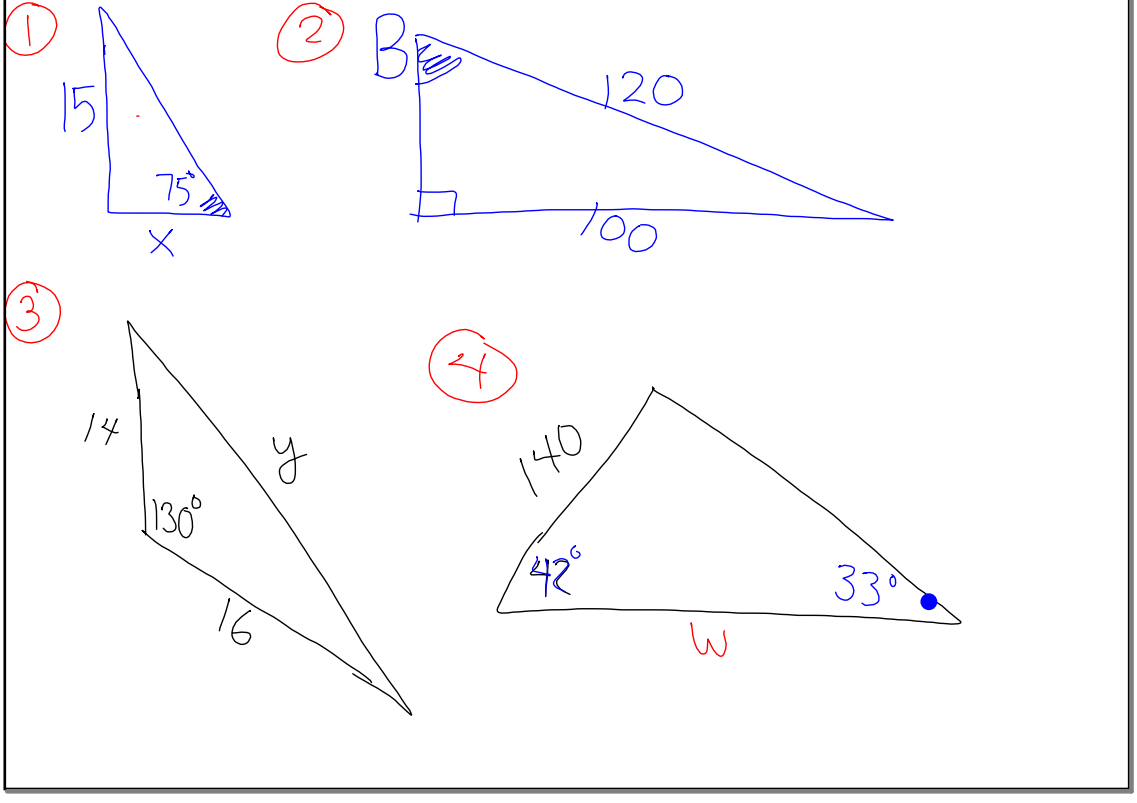
cut out (cm)	Volume (cm^3)
1	
2	
3	
4	
5	
6	
7	

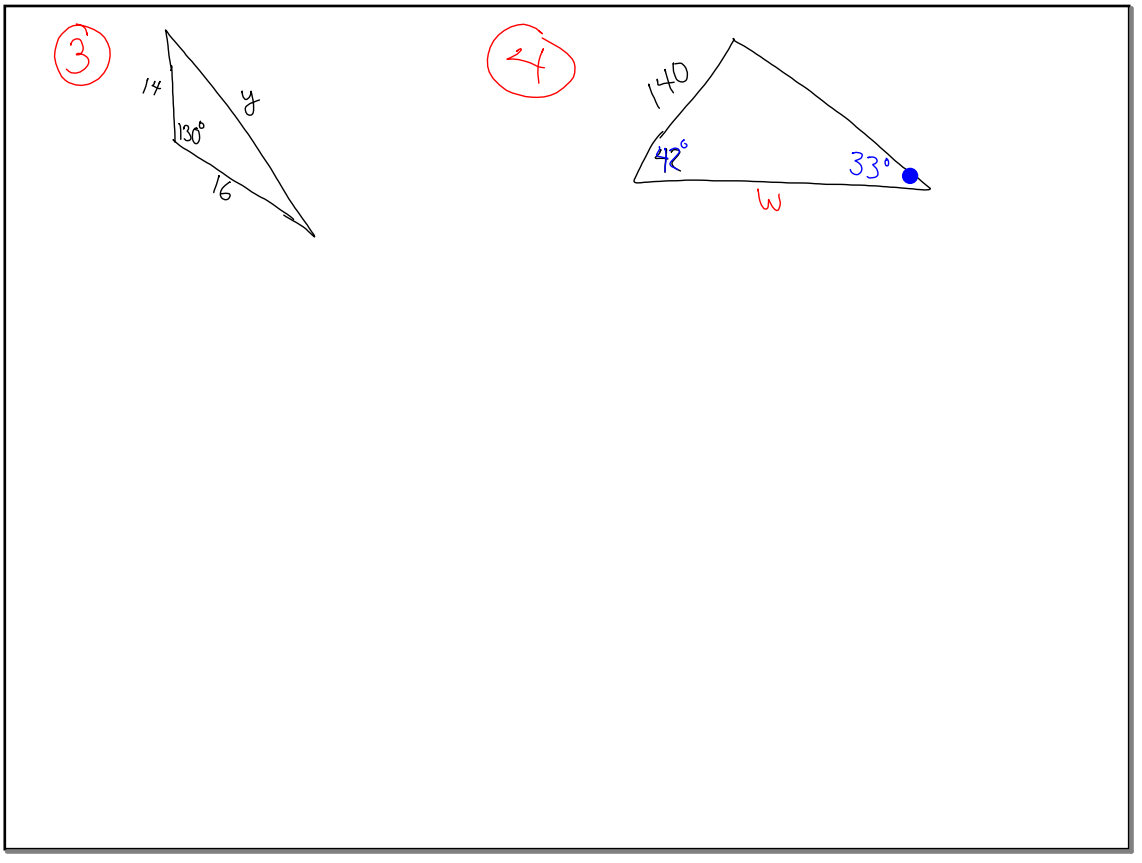
Per. 2

cut out (cm)	Volume (cm^3)
1	
2	
3	
4	
5	
6	
7	

Per 4

Review Trig





If you were absent last class :

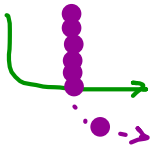
don't forget to check the back counter for Class Papers.

Also, don't forget to ask for the solutions to the HW that was due last Friday.

You already checked my blog so you know that we had an learning check quiz yesterday.

Assignment

1. 59-61 , 64-66, 68-69



59 (can make a sketch instead of a graph)

61 (Make a graph..... graph paper !!!)