

I

If you did the HW
pick up the solutions and check
your work.

Then you can ask me questions

II

Warm-up

Factor $2x^2 + 5x - 12$

$$2x^2 + 5x - 12 = (\quad) (\quad)$$

$$(2x-3)(x+4)$$

$2x^2$	
	-12

~~$$\begin{array}{l} -24x^2 \\ 5x \end{array}$$~~

	x	4
$2x$	$2x^2$	$8x$
-3	$-3x$	-12

~~$$\begin{array}{l} -24x^2 \\ 5x \end{array}$$~~

$$\begin{array}{l} -x \quad 24x \\ x \quad -24x \\ -2x \quad 12x \\ 2x \quad -12x \\ \hline -3x \quad 8x \\ 3x \quad -8x \end{array}$$

	x	4
$2x$	$2x^2$	$8x$
-3	$-3x$	-12

~~$$\begin{array}{l} -24x^2 \\ 5x \end{array}$$~~

$$\begin{array}{l} -x \quad 24x \\ x \quad -24x \\ -2x \quad 12x \\ 2x \quad -12x \\ \hline -3x \quad 8x \\ 3x \quad -8x \end{array}$$

B-97

$3(6)^x$

$3(2)^x$

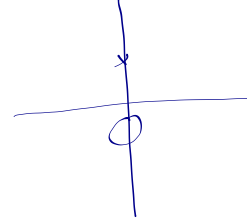
$4(1.5)^x$

$$f(x) = 3(6)^x \quad g(x) = 3(2)^x \quad h(x) = 4(1.5)^x$$

$$f(-1) = 3(6)^{-1} =$$

$$f(0) = 3(6)^0 = 3$$

$$f(1) =$$





Everyone title
your Notes:

Ch. 2 - Transforming
Functions

"Shrinking Targets"

Aim today

- 1 Collect non-linear data, 
- 2 Make a scatter plot of the data 
- 3 "Fit" an equation to that data $y =$
- 4 Then, make predictions with the equation.

- ✓ There are 8 circles.... A, B, C, H
- ✓ Each group will be **a set to cut.**
- ✓ find the mass of each in grams and record in a table in each of your notes.



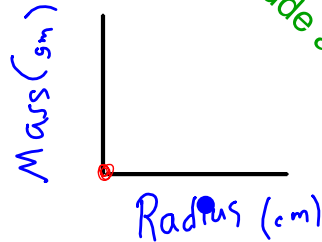
With the data from all 8 circles, each of you should

- a) make a table.
with headings

radius x	mass y
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

NO CALCULATOR

- b) Do not graph, Instead
predict the graph
(in a 15 second sketch)



- c) Think about : What should the x- and y- intercepts be ?

	radius (cm)	mass (grams)
H		
G		
F		
E		
D		
C		
B		
A		

	radius (cm)	mass (grams)
H	2.5	
G	2.75	
F	3.6	
E	5.0	
D	5.8	
C	6.5	
B	7.5	
A	8.2	

★

rad (cm)	mass (g)
2.5	1.7
2.75	2
3.6	3
5	5.8
5.8	8.0
6.5	12
7.5	11
8.2	16

Graph the data using a Graphing Calculator

- Clear out old data (if any)
- Enter the new data
- Create a scatter plot

Predict the Mass of a larger circle

Write down your prediction of a
circle with a radius of 45 cm

Decide the best type of function to use to model the data

What type of function?

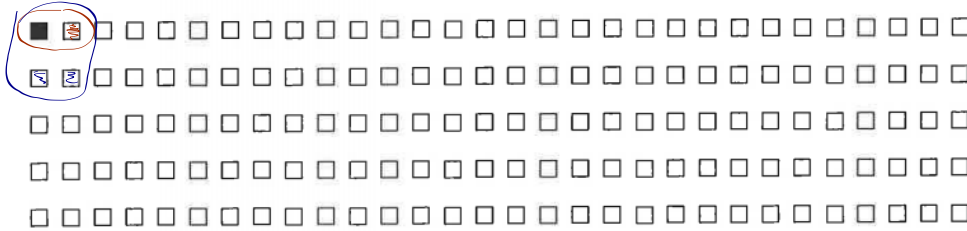
The Mass depends on πr^2

suggests a quadratic

$$y = x^2$$

On the TV show The Walking Dead, a disease was contracted that turns people into zombies or Walkers. If the Walkers bite a human, the human is turned in to a Walker. Assume that the each Walker turns one person a week into a zombie and that none of the Walkers are killed.

- The diagram below represents a town with 150 people. Each box represents a human; each filled in box represents a Walker. Keep track of the Walker and human populations over time.



Weeks	0	1	2	3	4	5	6	7	8	9	10
■ Walkers	1	2	4								
□ Humans	149	148	146								

Assignment

Finish the packet