

lots of supplies !

on short days: pre-cut out cardboard circles and transparencies.

HW Tally



HW Questions

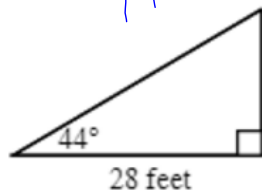


7-4. Karin was working on graphing the function  $f(x) = \frac{2}{x-3}$ . She made a table (shown below), but she is not sure how to graph the values in the table. Show Karin how to make her graph and tell her everything you know about her function. [7-4 HW eTool](#) (Desmos) [Homework Help](#)

$x$	-3	-2	-1	0	1	2	3	4	5	6	7	8	9
$f(x)$	$-\frac{1}{3}$	$-\frac{2}{5}$	$-\frac{1}{2}$	$-\frac{2}{3}$	-1	-2	*	2	1	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{2}{5}$	$\frac{1}{3}$

\*undefined

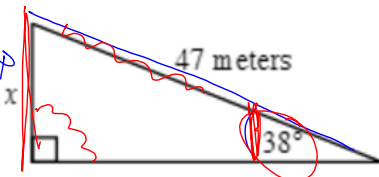
7-5. In each of the following triangles



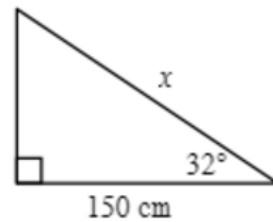
a.

$\frac{x}{\sin 38^\circ} = \frac{47}{\sin 90^\circ}$

$\sin(38^\circ) = \frac{x}{47}$



c.



b.

7-9. Consider the function  $y = x^2 + 5x + 7$ . [7-9 HW eTool \(Desmos\)](#). [Homework Help](#)

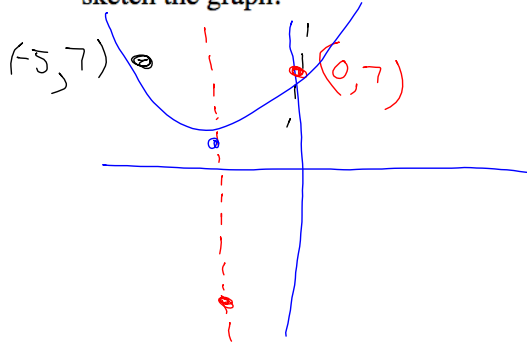
a. Complete the square to find the vertex.

$$y = (x + 2.5)^2 + 7.5$$

b. Find the y-intercept.

$$(-2.5, 7.5)$$

c. Use the vertex, the y-intercept, and the symmetry of parabolas to find a third point and sketch the graph.



$$y = \{x\}^2$$

$$y = x^2 + 5x + 7$$

7-10. Find the  $x$ - and  $y$ -intercepts of  $y - 7 = 3^{(x+4)}$ . !

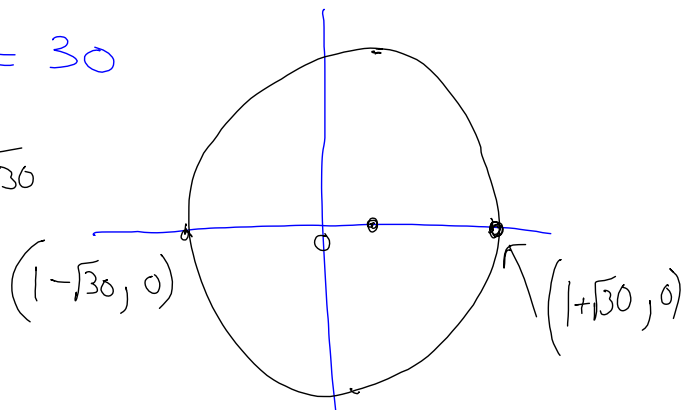
$$\begin{aligned}
 & \text{set } x=0 \\
 & y=0 \\
 & -7 = 3^{(x+4)} \\
 & \downarrow \\
 & x+4 = \log_3(-7) \\
 & y-7 = 3^4 \\
 & y-7 = 81 \\
 & (0, 88)
 \end{aligned}$$

7-11. Change  $x^2 - 2x + y^2 - 29 = 0$  to graphing form, sketch the graph, and label the important points. Homework Help

$$x^2 - 2x + 1 + y^2 = 29 + 1$$

$$(x-1)^2 + y^2 = 30$$

$$(\text{center}, 0) \quad r = \sqrt{30}$$



$$\left(\frac{-2}{2}\right)^2 = 1$$

Today

Collect data that is  
Periodic (cyclic)

(to create a new  
parent function)

If you are in  
a group of 4  
or 3



Ferris Wheel Operator

Data Geek

Orator (reader)

Scribe



Everyone Turn to page 317

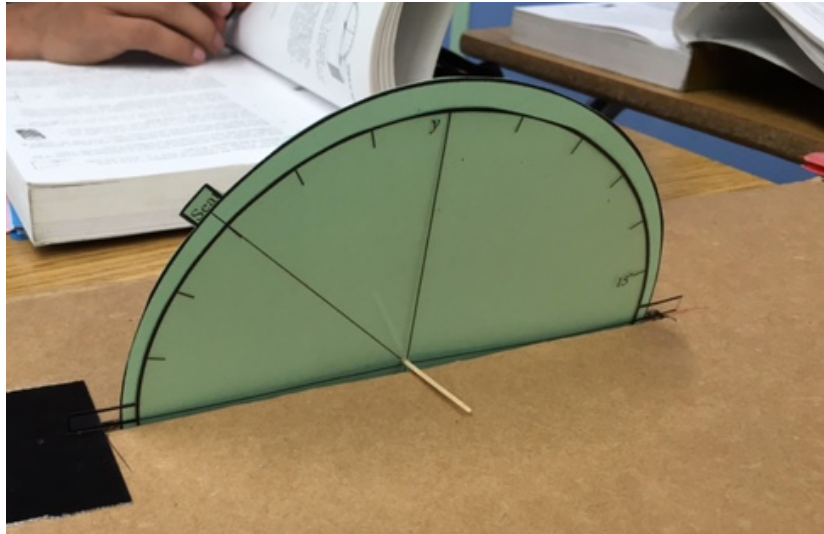
Orators get  
ready

Face two desks together.

All group members stand on one side.



## Huddle with Operators



data  
geeks  
to  
measure

follow instructions on 7-12  
for a, b, c

Each group will turn in

- A recording Sheet
- Graph
- Answer to part c



Next

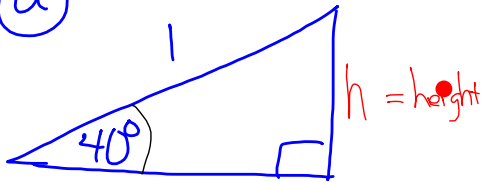
Do 7-13 as a team

ab only

cd with the help of Mr C

Each of you should write all details in your own notes

a) Soh Cah Toa

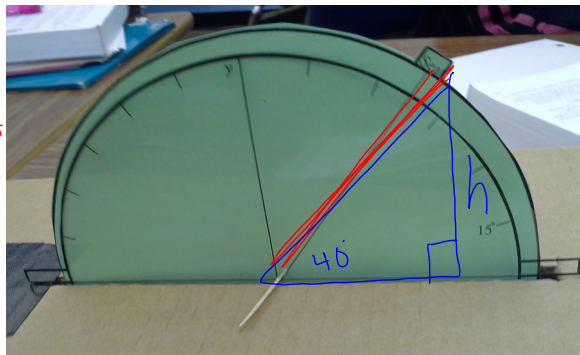


$$\sin 40 = \frac{h}{1}$$

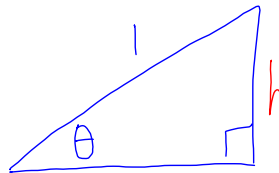
$$h = \sin 40^\circ$$

$$= \cancel{.745}$$

$$.64$$



b)



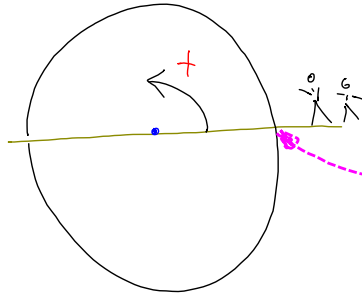
$$\sin \theta = \frac{h}{1}$$

$$h = \sin \theta$$

$$h(\theta) = \sin \theta$$

For the next several weeks you will be given problems that refer to the screamer.

Three things you have to remember

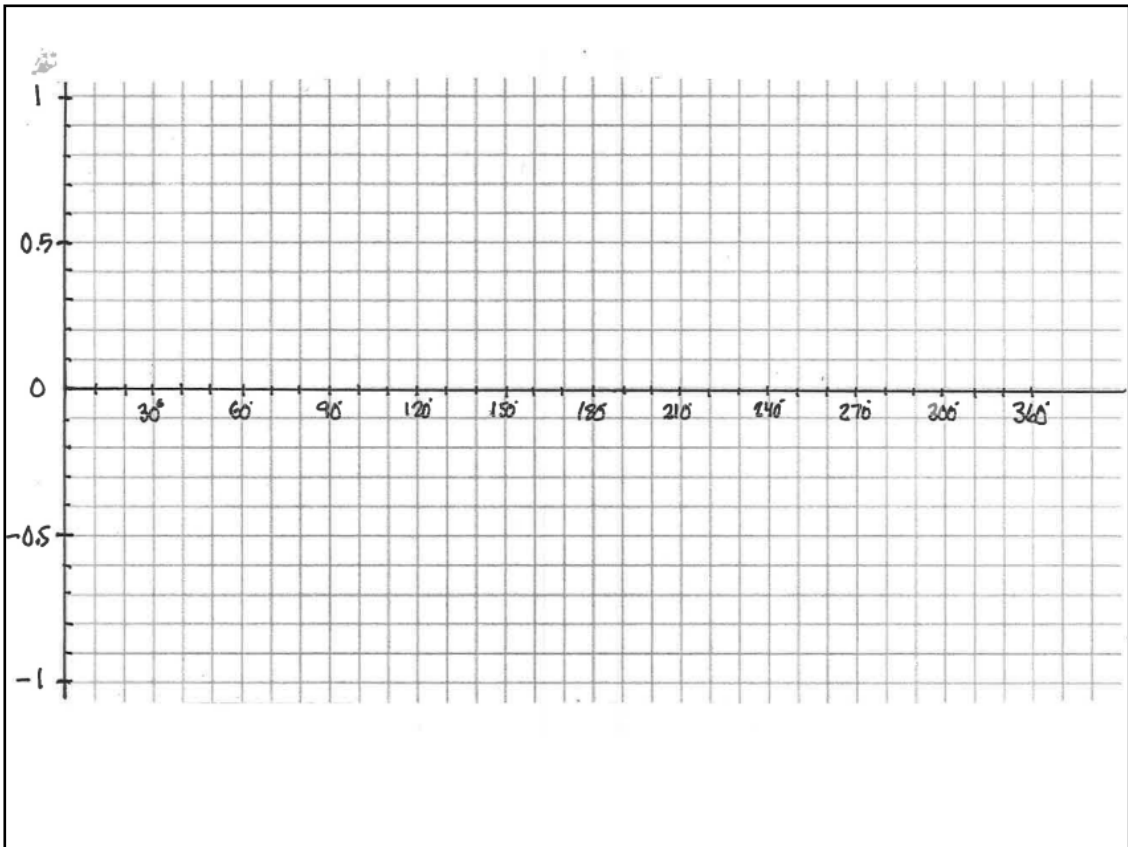
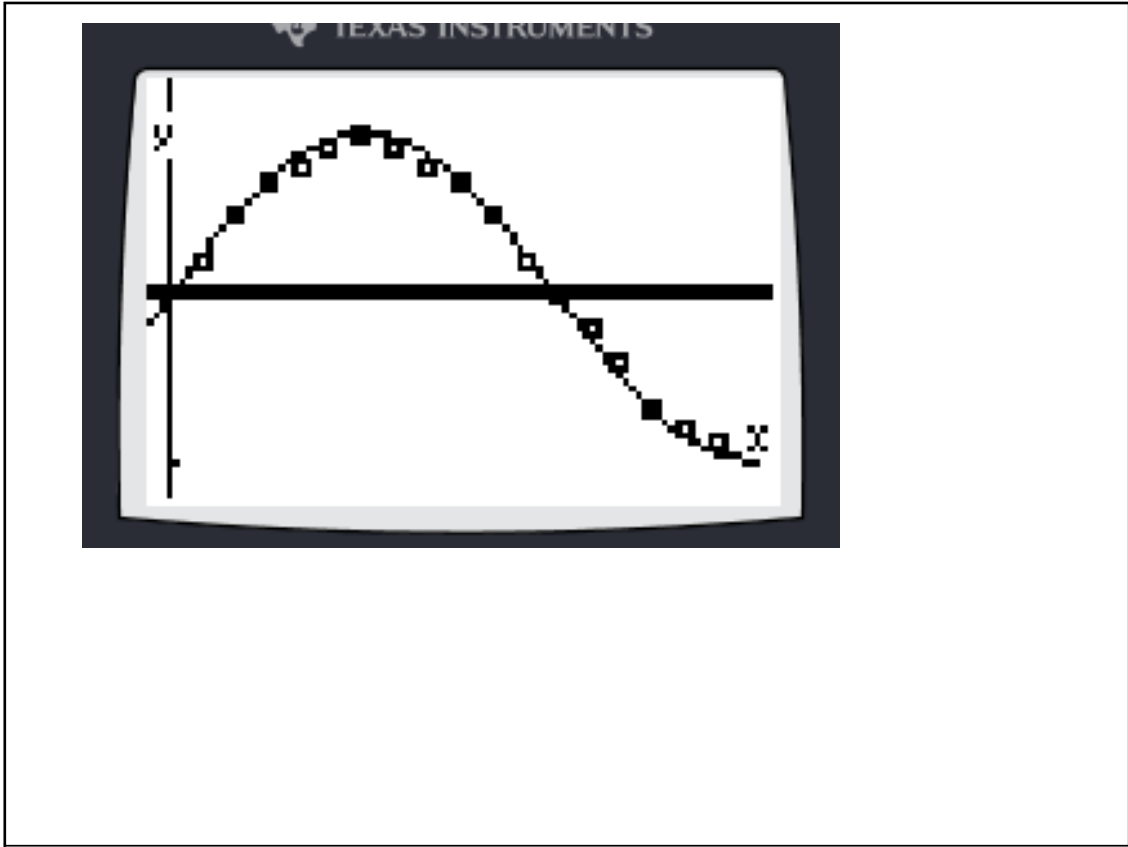


100 foot radius

Starting point at ground level

Screamer rotates counter-clockwise

© Enter data in GDC



Next class:

★ We'll continue to Analyze this data.

★ Staple your table on top of your graph. Write all of your names on top. Turn in.

Assignment:

7...15-16, 18-20, 22-23

do 21 for extra fun  
(optional challenge)

Yes, I do want you  
to do #23

pdf

**but ask any surfer, and they will tell you waves come in very different sizes, as do all waves**

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**To fully understand waves, we need to understand measurements associated with these waves, such as .....**

**how often they repeat  
(their *frequency* )**

**how long they are  
(their *wavelength* ),**

**and their vertical size  
( *amplitude* ).**

