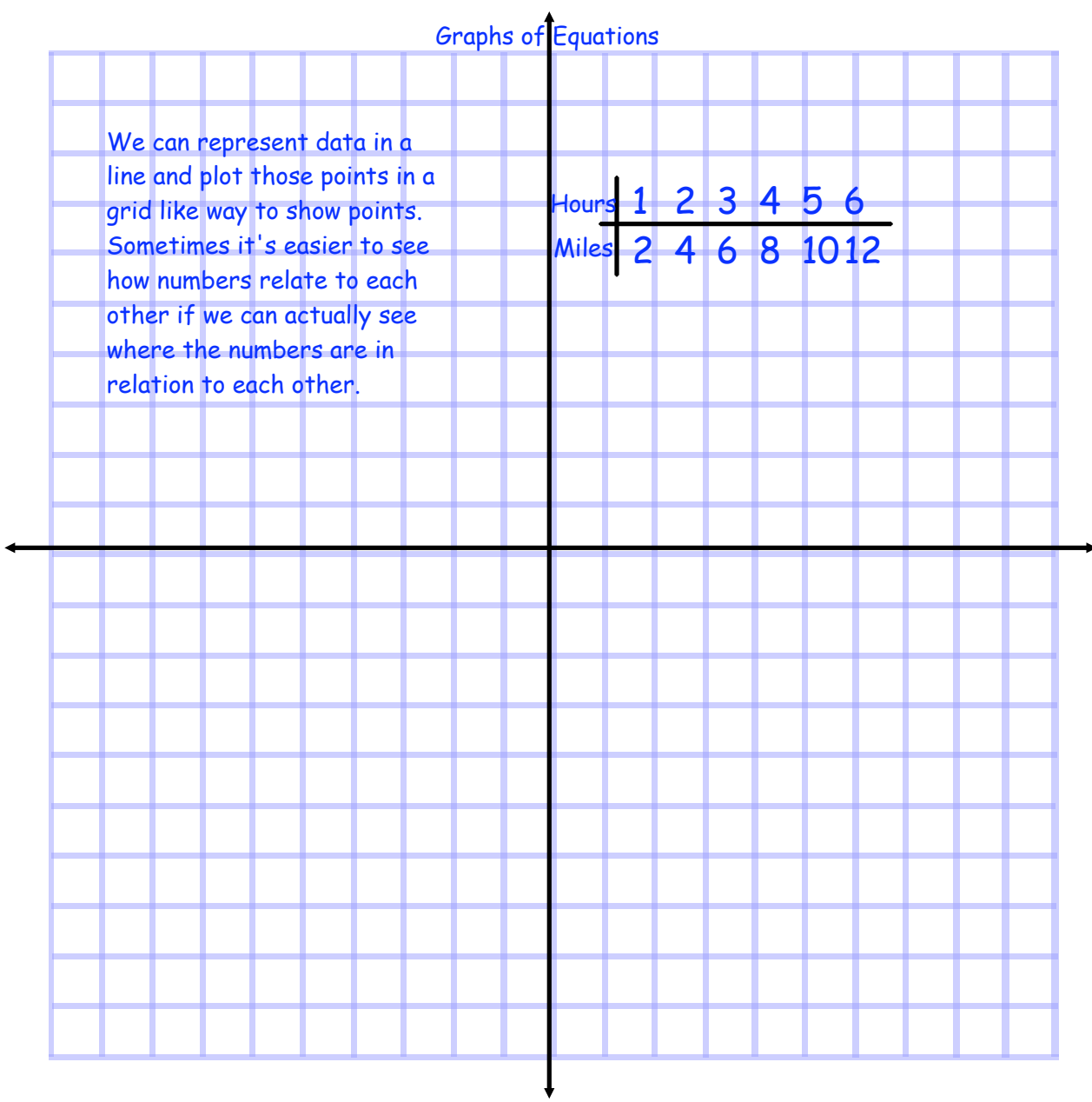


### Graphs of Equations

We can represent data in a line and plot those points in a grid like way to show points. Sometimes it's easier to see how numbers relate to each other if we can actually see where the numbers are in relation to each other.

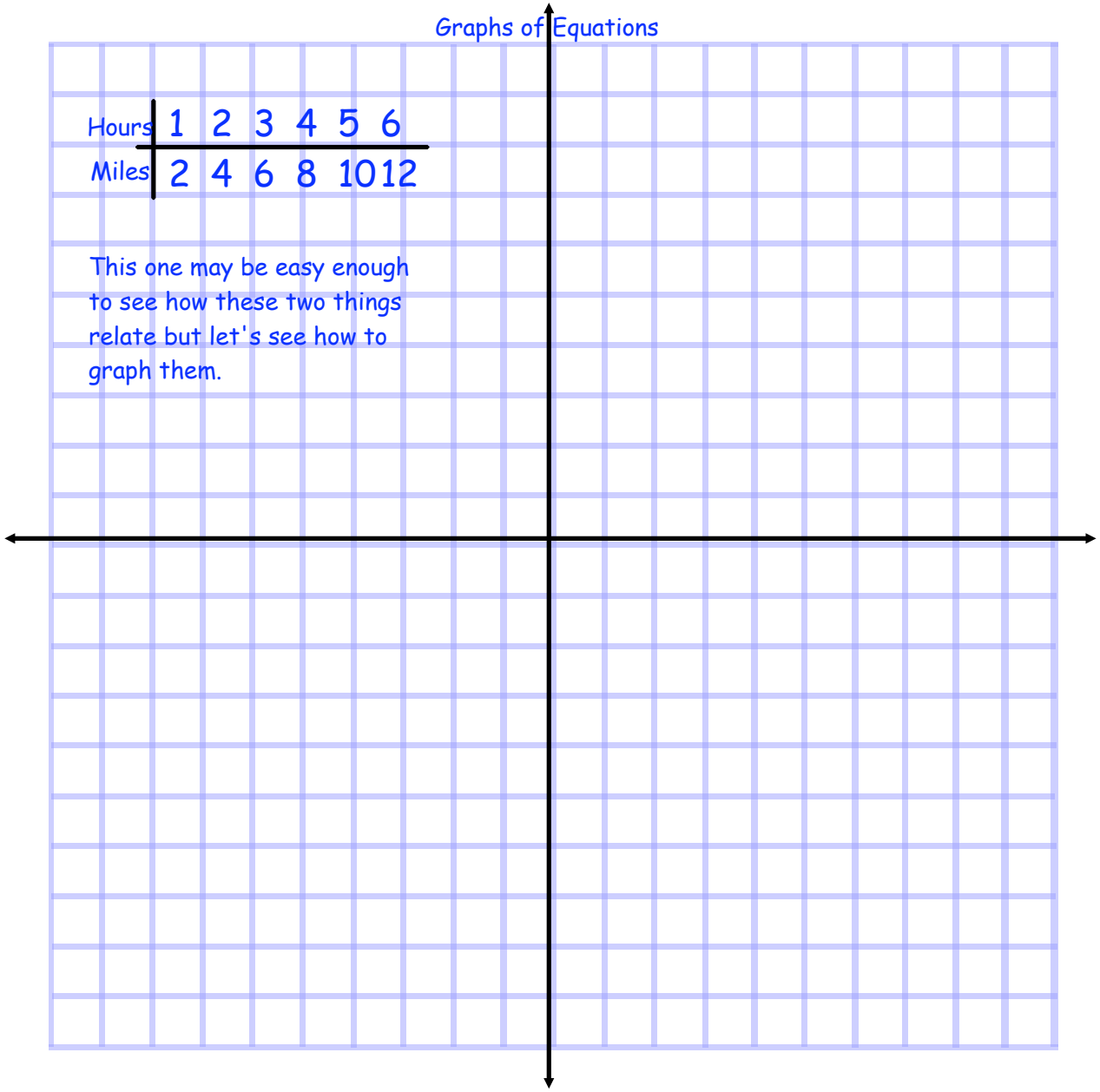
Hours	1	2	3	4	5	6
Miles	2	4	6	8	10	12



Graphs of Equations

Hours	1	2	3	4	5	6
Miles	2	4	6	8	10	12

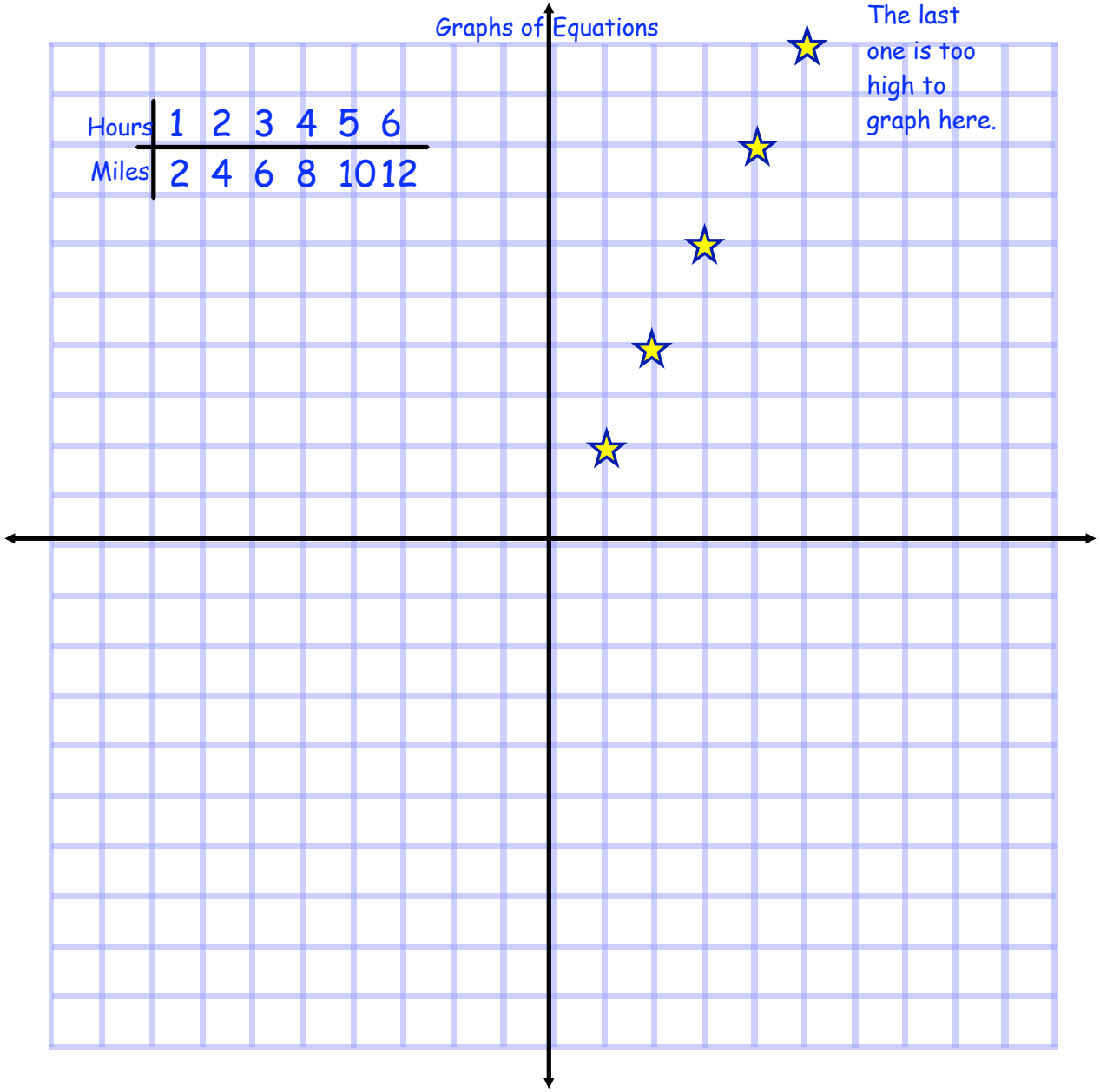
This one may be easy enough to see how these two things relate but let's see how to graph them.



Graphs of Equations

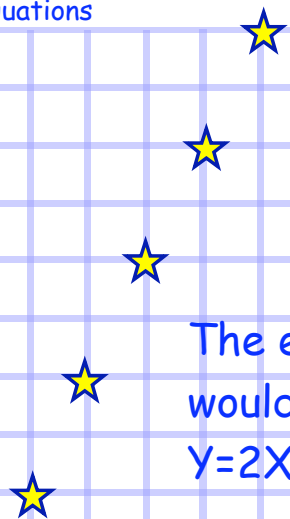
Hours	1	2	3	4	5	6
Miles	2	4	6	8	10	12

The last one is too high to graph here.



Graphs of Equations

Hours	1	2	3	4	5	6
Miles	2	4	6	8	10	12

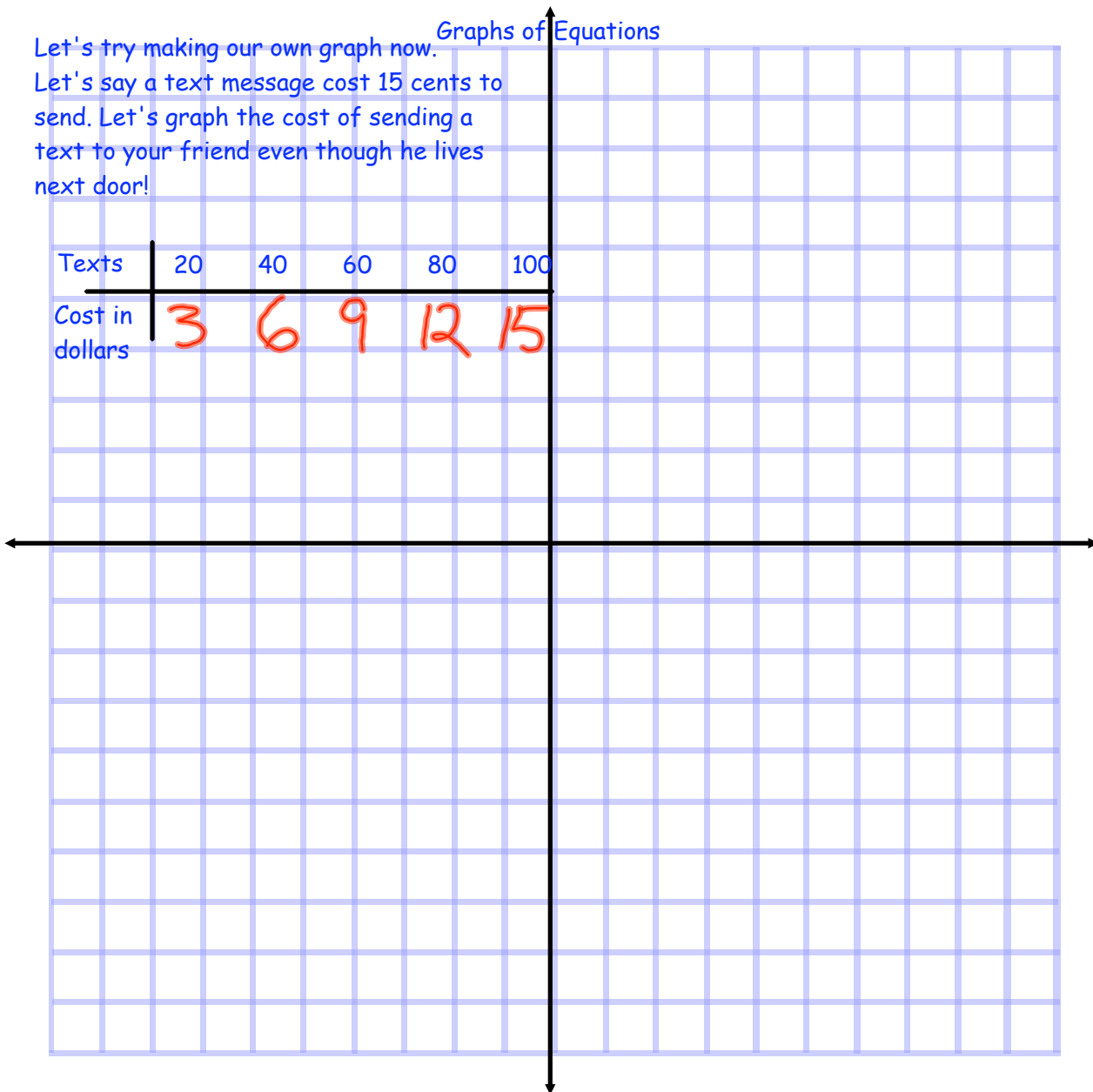


The equation for this  
would look like this  
 $Y=2X$

Graphs of Equations

Let's try making our own graph now.  
 Let's say a text message cost 15 cents to send. Let's graph the cost of sending a text to your friend even though he lives next door!

Texts	20	40	60	80	100
Cost in dollars	3	6	9	12	15



Graphs of Equations

Lets make an equation that will give us the numbers we need.

$$\text{cost} = \text{Texts} \cdot 0.15$$

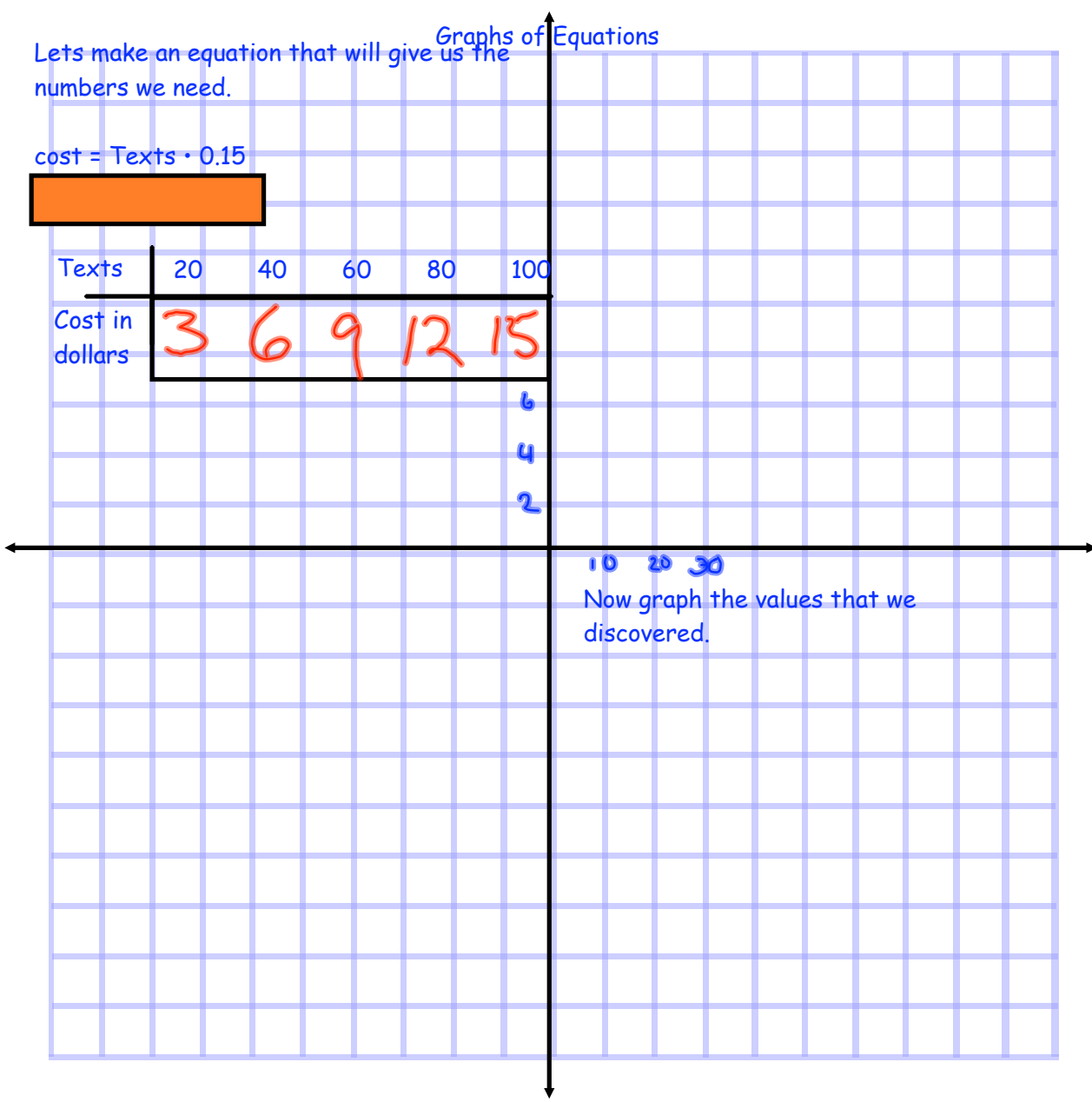


Texts	20	40	60	80	100
Cost in dollars	3	6	9	12	15

6  
4  
2

10 20 30

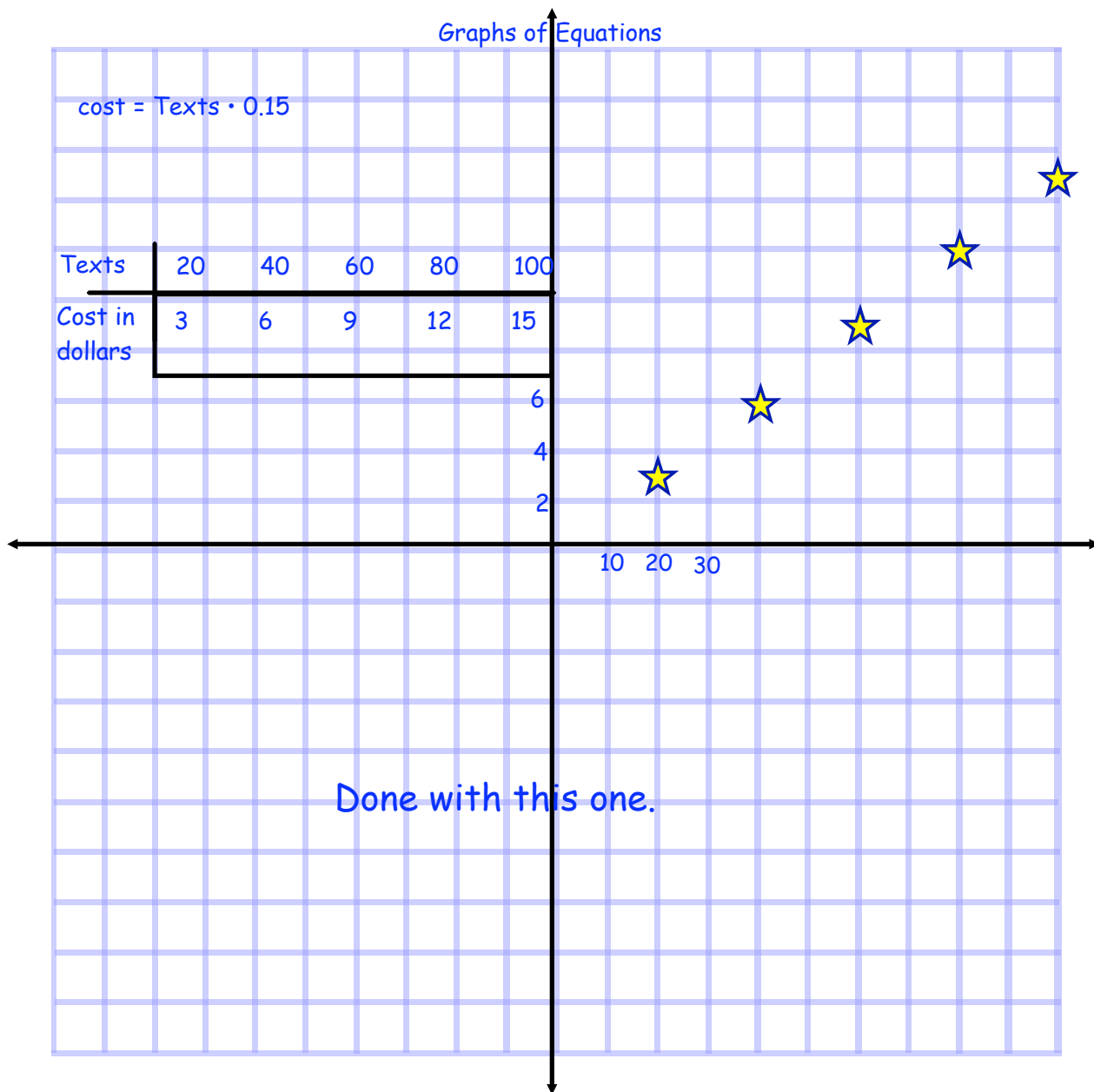
Now graph the values that we discovered.



Graphs of Equations

$$\text{cost} = \text{Texts} \cdot 0.15$$

Texts	20	40	60	80	100
Cost in dollars	3	6	9	12	15



Done with this one.

Graphs of Equations

And sometimes you have  
to work backwards  
Can you figure out the  
equation that goes with  
this data?  
it should be in the form  
 $Y = MX + B$

