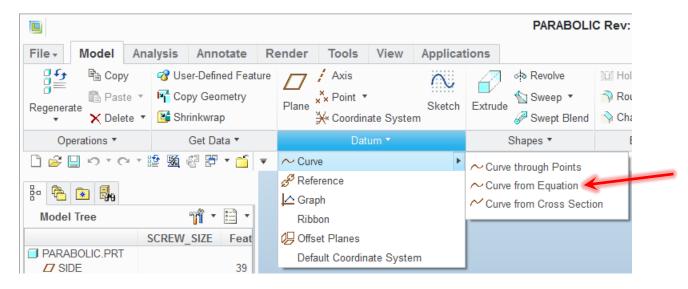
ELLIPSE EQUATION

Model => Datum => Curve => curve from Equation



Click on Equation...

.

	PARABOLIC Rev: 00.2+
File - Model Analysis Annotate Render Tools View Applications	CURVE: From Equation
× Cartesian ▼ Equation From 0.000 ▼ To 1.000 ▼	l 🛛 🕅 80 🖌 🗙
Reference Properties	

Enter the following in the upper half of the window below. This is the ellipse equation.

a=EQA

b=EQB

r=2

```
x=a*(cos(t*360))^(2/r)
```

y=b*(sin(t*360))^(2/r)

z=0

		Equation		-
le Edit Inse	rt Parameters Utilitie	s Show		
Relations				
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a=EQA b=EQB r=2 x=a*(cos(t*360))^ y=b*(sin(t*360))^ z=0	r(2/r) (2/r)			
Local Parameters	nd all sublevels	▼ Sub Item	ns	
Owner	Name ₹	Туре	Value	Access
			00.000000	
~ Curve 2	A	Real Number	20.000000	Cocked
Curve 2	A B	Real Number Real Number	10.000000	Cocked Cocked
				-
∼ Curve 2	В	Real Number	10.000000	Cocked
∼ Curve 2 ∼ Curve 2	B EQA	Real Number	10.000000 20.000000	Cocked
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From the lower window, Local Parameter. Change the Filter By to Current and all sublevels.

-

 Local P 	arameters	/				
Filter By	Current and all sublevels	 Sub Iter 	ns			
Qwi	Default	/alue	Access	Sour	Descr	F
ALC:	Current and all sublevels	000000		Delation		
70 00	Current and all sub annotation elements	.000000	EUCKe	Relation		
~ Cu	Current and all sub geometry	Select from	n existing filt	ters to filter y	our paramet/	er table.
	Filter By	Local Parameters Filter By Current and all sublevels Default Current and all sublevels Current and all sublevels Current and all sub annotation elements ~ Cu Current and all sub geometry	Filter By Current and all sublevels Sub Iter Default Value Current and all sublevels .000000	Filter By Current and all sublevels Sub Items Default Value Access Current and all sublevels .000000 Clocke	Current and all sublevels Sub Items Default Value Access Sour Current and all sublevels .000000 Current Relation	Filter By Current and all sublevels Sub Items Default Value Access Sour Descr Current and all sublevels .000000 Descr Relation

Add two additional parameters by clicking on the Green plus twice.

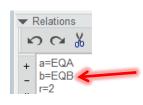
~ Curve 2	EQA	Real Nu	20.000000	Cocke	Relation	
~ Curve 2	EQB	Real Nu	10.000000	Cocke	Relation	

Name them EQA and EQB.

~ Curve 2	EQA	Deal Nu 20.00000 Blocks
~ Curve 2	EQB	Select Parameter
∼ Curve 2	R	Create New
~ Curve 2	T -	
~ Curve 2	Х	Edit Properties
~ Curve 2	Y	Select all same name parameters
~ Curve 2	Z	Delete
		Insert to Relations
		Insert Unit
		Text Symbol

Select EQA and RMB Insert into Relations. Have the cursor in position to receive the parameter.

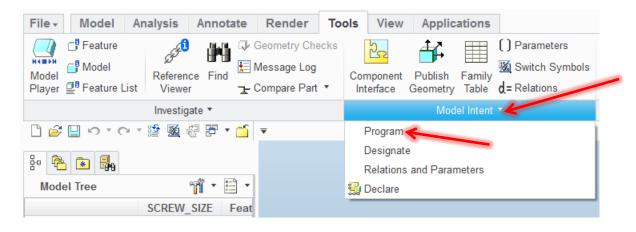
Repeat for EQB

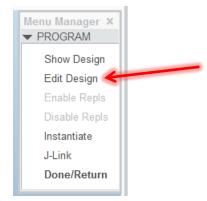


ОК

Create the model program

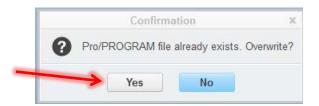
Tools => Model Intent => Program => Edit design => From Model => Yes





Select Edit Design

From Model



Yes.

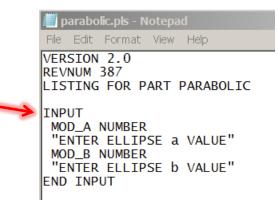
Enter the lines under INPUT

MOD_A NUMBER

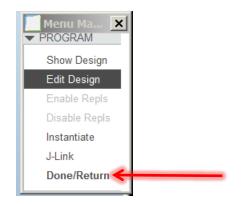
"ENTER ELLIPSE a VALUE"

MOD_B NUMBER

"ENTER ELLIPSE b VALUE"

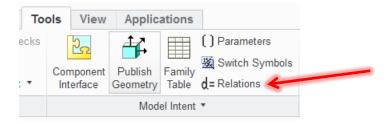


File => Save



Click on Done/Return

Tools => d=Relations



These are the important lines. They have the Feature FID_120, which tie the program to the equation.

Thanks Me Givens!

EQA:FID_120=MOD_A

EQB:FID_120=MOD_B

When selected and RMB Insert into Relations, the FID number is automatic found and written into the relations of both the program and the relations.

Part		- 🕨 🗖	PARABOLIC				
▼ Relations							
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EQB:FID_120=MOD) B						
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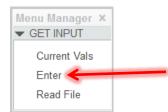
Program

📕 parabolic.pls - Notepad	_ 🗆 🗙
File Edit Format View Help VERSION 2.0 REVNUM 408 LISTING FOR PART PARABOLIC	-
INPUT MOD_A NUMBER "ENTER ELLIPSE a VALUE" MOD_B NUMBER "ENTER ELLIPSE b VALUE" END INPUT	
RELATIONS EQA:FID_120=MOD_A	
EQB:FID_120=MOD_B END RELATIONS	
ADD FEATURE (initial number 1) INTERNAL FEATURE ID 39	
DATUM PLANE	

To run the program

Enter CTRL G

Click on Enter, then check box MOD_A and MOD_B, and Done Sel



Menu Manager ×	Menu Manager ×
▼ INPUT SEL	▼ INPUT SEL
□ MOD_A □ MOD_B	MOD_A
Select All	Select All
Unsel All	Unsel All
Done Sel Quit Sel	Done Sel 🗲 🗕

Enter the major **a VALUE**, the [20.000] is the current value. The value will be 0.000 for the first run.

	ENTER ELLIPSE a VALUE [20.0000]	~ ×
	This time I want a value of 30.	
	ENTER ELLIPSE a VALUE [20.0000]	
9	30	🖌 🔪

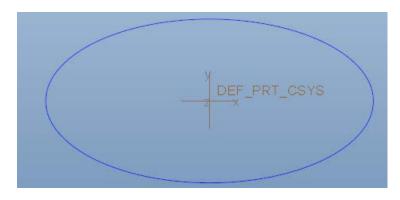
Click on the Green check box.

Enter the minor **b VALUE**, the [10.000] is the current value. The value will be 0.000 for the first run.

ENTER ELLIPSE b VALUE [10.0000]	
This time I want a value of 15	/
ENTER ELLIPSE 6 VALUE [10.0000]	×

Click on the Green check box.

The ellipse is created.



CTRL G to run the program to modify the a and b values.

The basic fundamentals of Parametric Part Programming will add diversity and opportunities to enhance your usage of the Creo software. This is the first of many geometric mathematical equations presentations to follow.

Thank you for your continued learning. Please contact me for any assistance.

Daniel Pasholk