CALVIN CYCLE WORKSHEET

Name _____ **Period** _____

Fill in the blanks with the following words/terms:

Carbon fixation	RuBP	PGA	PGAL
C3 plants	stomata	C4 Plants	C4 pathway
CAM	ATP	NADP+	NADPH
CO_2	stroma	ADP	light
Organic compounds (sugar)	light intensity	open	night
two	phosphate	C4 pathway	temperature
CAM pathway	4	3	closed
Day	0		enzyme

The purpose of the Calvin cycle is to fix _____ . The Calvin cycle takes place in the _____. There are 3 steps to the Calvin cycle. In step 1, _____ is fixed by an enzyme called Rubisco. Rubisco adds CO2 to RuBP to form 2 molecules of _____.

In step 2, 2 molecules of PGA are converted to 2 molecules of PGAL. Step 2 uses ATP and NADPH that were made during the _____ reactions. The number of molecules of ATP used in step 2 is _____. The number of molecules of NADPH used in step 2 is _____. When ATP is used, it is converted to _____. In step 2, each PGA molecule receives one _____ from ATP to produce PGAL. In step 2, ADP and NADP+ are formed, and then they can be used again in the _____ reactions to produce new ATP and NADPH.

In step 3, 2 molecules of PGAL are converted to either _____ _____ or RuBP. Step 3 completes the Calvin cycle. RuBP is replenished, and then it can be used again to fix more _____.

In your own words, explain why the Calvin cycle is called a 'cycle'.

_____

_____