2. Reduction (medium blue arrows): A phosphate from each of 6 ATPs and a pair of electrons from each of 6 NADPH are used to produce 6 molecules of glyceraldehyde-3-phophate (G3P) molecules.

One of the G3P molecules exits the cycle and is available to make organic compounds, like glucose. The other 5 G3P remain in the Calvin cycle. **See Slide**

 Regeneration of the carbon dioxide acceptor RuBP (dark blue arrows): The five molecules of G3P that remain in the cycle are rearranged into three molecules of RuBP. See Slide

Three ATP supply the energy required. RuBP is now available to accept more carbon dioxide and the Calvin cycle continues

5 G3P + 3 ATP (energy) \rightarrow 3 RuBP (used to fix 3 more incoming CO₂) Calvin Cycle continues



The one sugar is G3P (3 carbon sugar). It takes 2 complete cycles of the Calvin Cycle to make glucose (6 carbon sugar)