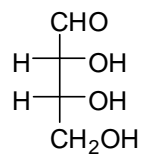
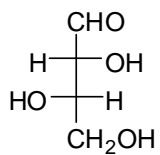


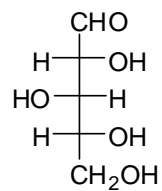
1. On the last recitation assignment, you were asked to cyclize these sugars and draw the structures without any concern for stereochemistry. Now, get really freaked out about stereochemistry and draw the cyclized forms of these sugars with stereochemistry indicated for all chiral centers.



erythrose



threose



xylose

2. Raffinose is a trisaccharide found in beans, cabbage, asparagus and broccoli. Because humans don't have the proper  $\alpha$ -galactosidase enzyme to break down raffinose, it passes through to the lower intestine where gas producing bacteria ferment raffinose leading to the fragrant odors commonly associated with "bean-tooting". Raffinose has the structure, *O*- $\alpha$ -D-galactopyranosyl-(1 $\rightarrow$ 6)-*O*- $\alpha$ -D-glucopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-fructofuranoside. With the information below, draw raffinose.

