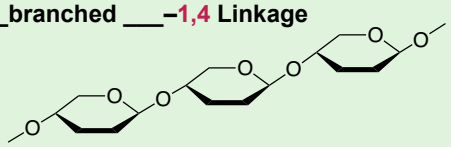
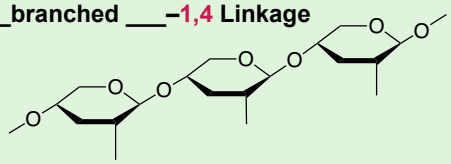
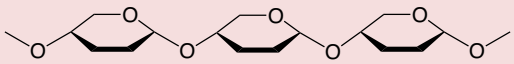
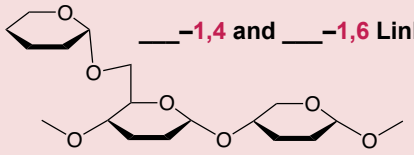
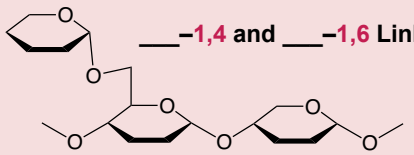
CONCEPT: POLYSACCHARIDES

●Polysaccharides (glycans) can be ENORMOUS (>1 million units), while their composition can stay relatively _____.

□ Usually consist of just ____ or ____ monosaccharides repetitively linked together.

□ Functions include _____ support or _____-storage.

Types of Polysaccharides

Polysaccharide	Source	Linkage Type	Description
Cellulose	_____	____branched ___–1,4 Linkage 	Composes plant cell _____; Thousands of repeated units
Chitin	_____	____branched ___–1,4 Linkage 	_____ and Fungal cell _____
Amylose	_____	 ____branched ___–1,4 Linkage	Makes up ____ of plant starch
Amylopectin	_____	 ___–1,4 and ___–1,6 Linkage	Makes up ____ of plant starch; some branching
Glycogen	_____	 ___–1,4 and ___–1,6 Linkage	"_____ Starch" extensive branching

EXAMPLE: Match each of the following statements with the correct polysaccharide.

I. Amylopectin, glycogen II. Glycogen III. Cellulose

___ a) An unbranched polysaccharide composed of β-1,4 glycoside linkages.

___ b) A polysaccharide that is stored in muscle tissues.

___ c) A polysaccharide containing α-1,4 and α-1,6 glycosidic linkages.

PRACTICE: Which plant-based polysaccharide possesses only α-1,4 glycosidic linkages?

a) Chitin b) Glycogen c) Glycan d) Amylose e) Cellulose