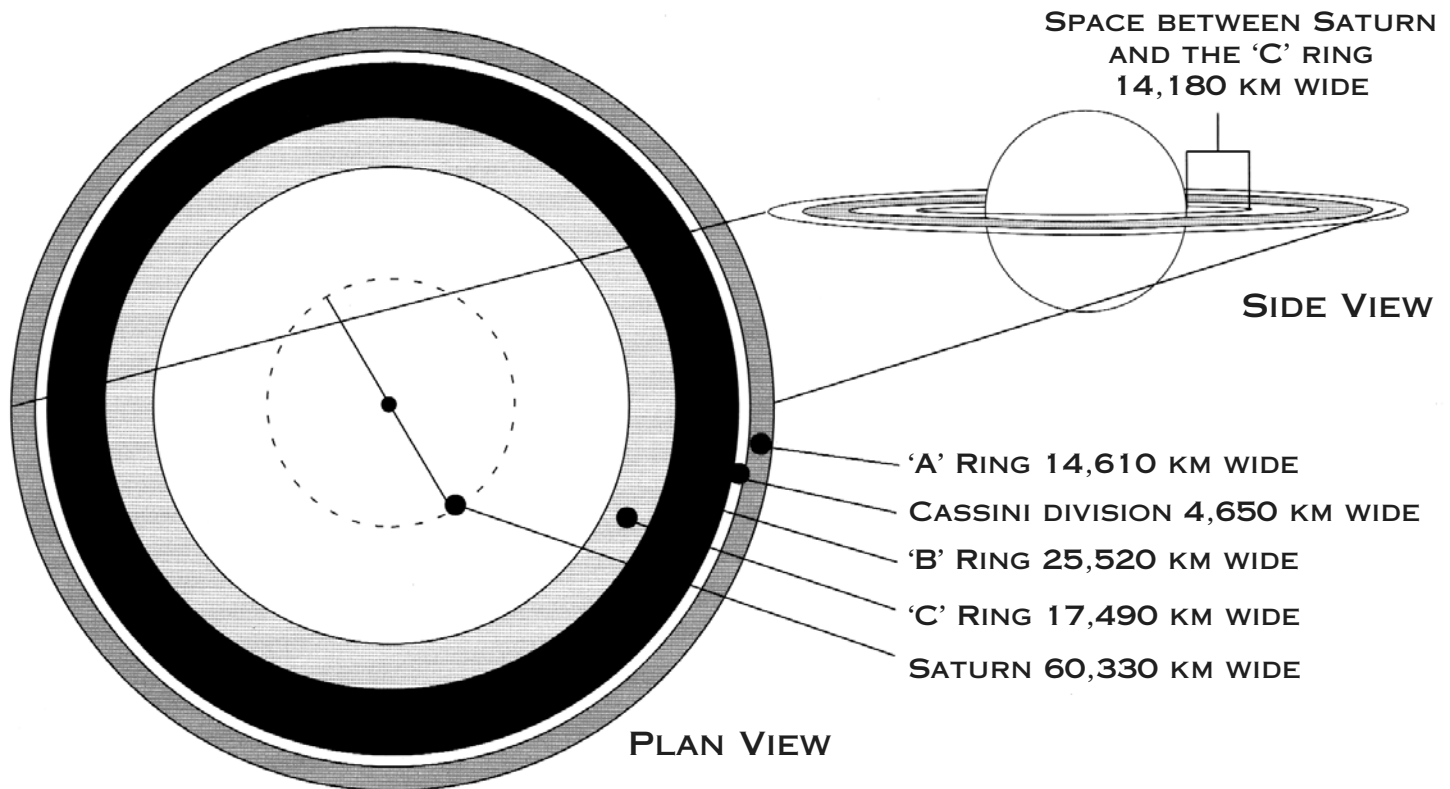


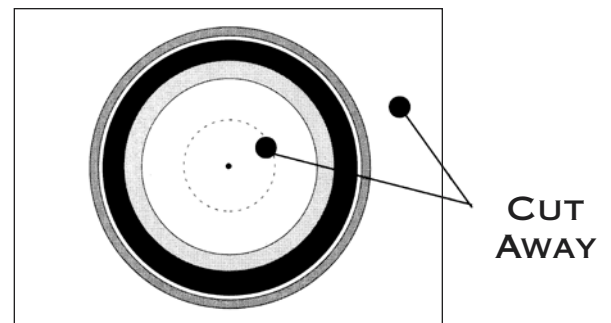
# Making Saturn's Rings



**1** To draw your model's rings with the same proportions as Saturn's actual rings, you must scale down the size of the rings from kilometers to centimeters. Your teacher will either ask you to calculate the scaled size of Saturn's rings or give the numbers to you.

Name of feature	Actual width km	Scaled width cm
'A' ring	14,610	
Cassini division	4,650	
'B' ring	25,520	
'C' ring	17,490	
Space between Saturn and 'C' ring	14,180	→ 1.0 example

**2** Use the scaled widths in the chart to draw Saturn's rings on a transparency with a pencil and compass. They should look like this when your are finished:



As you can see from this diagram, you must draw five circles. The radius of the first (smallest) circle will be the radius of your grapefruit Saturn (4.5 centimeters) plus the space between Saturn and the 'C' Ring (1.0 centimeter). So, set your compass to draw a circle of radius 5.5 centimeters. The radius of the second circle will be the radius of the first circle (5.5 centimeters) plus the scaled width for the 'C' Ring. What is the radius of the third circle?

**3** Paint your rings to look like Saturn's rings as follows:

- The 'A' ring is translucent, so paint it lightly
- The Cassini division is almost empty, so don't paint it at all.
- The 'B' ring is almost opaque, so paint it heavily.
- The 'C' ring is translucent, so paint it lightly, like the 'A' ring.