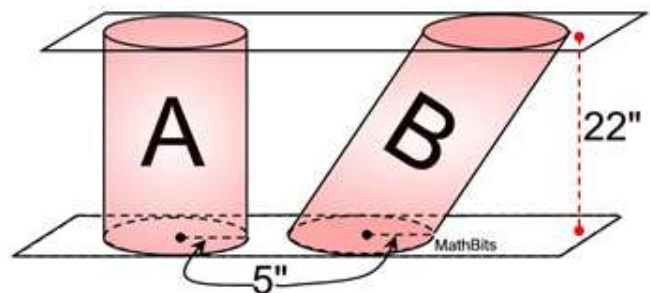


THE LEANING TOWER OF PISA AND GEOMETRY?



The world famous leaning tower of pisa was originally built perpendicular to the ground. Over time one side of the tower began to sink into ground and now we have a leaning structure seemingly defying gravity and the laws of physics. As the tower now sits it have a cylindrical body with a height of 56.67m and a diameter of 15.484m at its base. Let's say we have another tower directly next to the leaning tower of pisa, cylindrical in nature that did not sink into the ground and it has measurements of a height of 56.67m and a 15.484m diameter. **The question I pose to you is this, are the volumes of the two towers the same, if so why? What do the two towers have in common? What might be different, does that difference matter? What about cross-sections?**

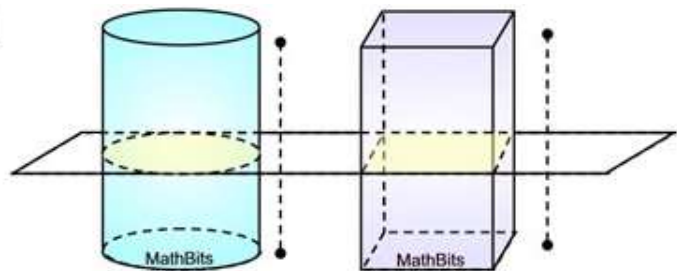
A right circular cylinder, A , and an oblique circular cylinder, B , are shown at the right. Find the volume of cylinder B in cubic inches.





Above you see two stacks of quarters. Each stack contains the same amount of quarters. Are their volumes the same and how do you know?

The right circular cylinder and the right rectangular prism have the same heights and the same base areas. A plane, parallel to the bases slices the two solids.



If the rectangular cross section has a base length of 16 inches and a width of 4π inches, what is the radius of the cylinder's cross section?