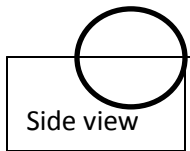


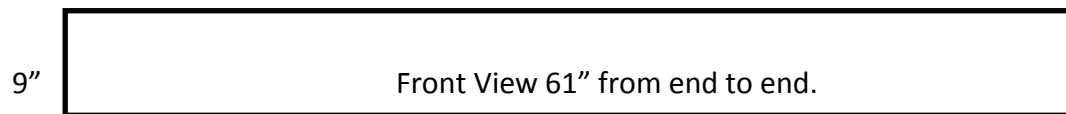
Area/Volume

Concrete Hog Water Trough

Steel water troughs bend and rust. Nipple watering systems freeze in the winter. This concrete automatic watering system will revolutionize the small-producer pork industry!



I have built a box that has inside dimensions of 22" wide by 9" tall. To form a circular bottom for the trough I placed a 10" diameter cylinder from a water heater at the front edge of the trough. Exactly half of the cylinder is within the box. The total length of the trough is 61".



1. First, find the cross-sectional area using the side-view. (Square Feet!)
(Area of a circle = πr^2)
2. How many **cubic feet** of concrete will I need for one 61" long water trough?
(add 10% for waste)
3. Concrete will cost \$107.70 per **cubic yard** this winter. How much will the concrete for 1 trough cost?
4. Jacks will sell a bag of "Kwikset" for \$3.99. Each bag will make 1/42 of a cubic yard of concrete. How many bags would it take for one trough? How much will this cost?