

Pool and Spa Volume

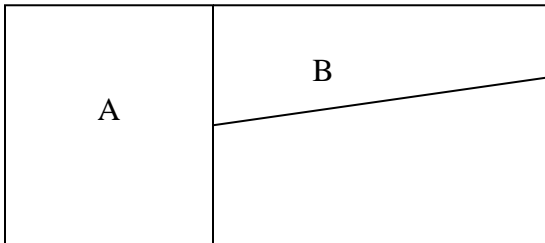
Rectangular Pool Volume

$$L \text{ (length)} \times W \text{ (width)} \times AD \text{ (Average Depth)} \times 7.5$$

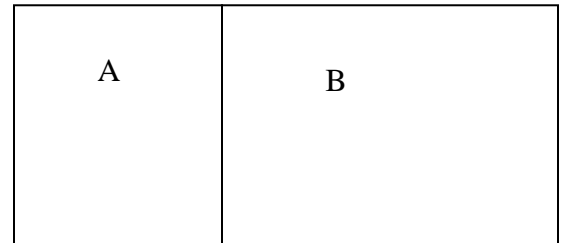
For a multi level depth pool you divide it into two bodies of water: diving well A and swimming area B, figure the volume for each, then add the sections together.

Sample: The pool is 40 ft. wide. The diving well A is 35 ft. long and 18 ft. deep. The swimming area B is 45 ft. long and 3 ft. deep at the shallow end and 5 ft. deep at the deep end.

Side View



Top View



Section A $35' \text{ (L)} \times 40' \text{ (W)} \times 18' \text{ (AD)} \times 7.5 = 189,000 \text{ Gallons}$

Section B $45' \text{ (L)} \times 40' \text{ (W)} \times 4' \text{ (AD: } 3' + 5' \text{ divided by } 2) \times 7.5 = 54,000 \text{ Gallons}$

Total Pool Volume: 243,000 gallons

Circle Volume

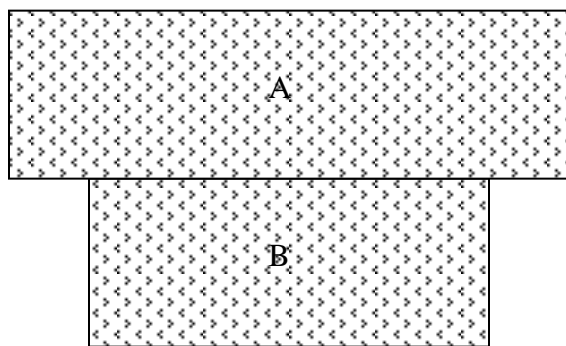
D (Diameter) divided by 2 = R (Radius)

$R \times R \times 3.14 \times D$ (depth) $\times 7.5$ = gallons

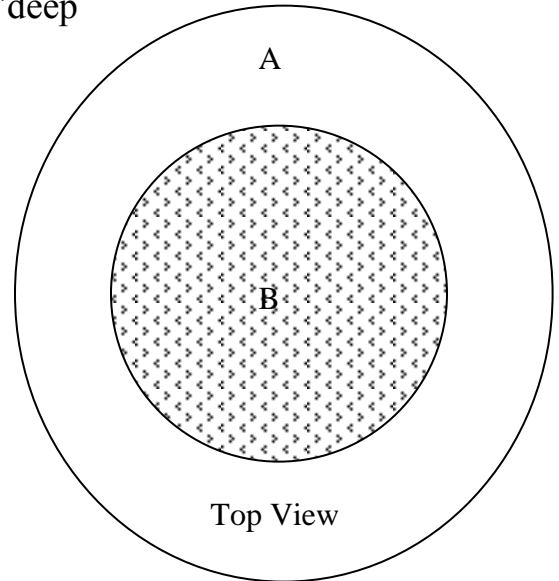
For a spa with a foot area that is deeper, divide the spa into two sections, the upper and lower (side view is easiest to understand this)

Sample: Spa is 12 ft. in diameter, the bench area A is 18" deep

The foot area B is 18" deep and 9 ft. in diameter



Side View



Top View

Section A: 12 (D) divided by 2 = 6 (R)

$6 (R) \times 6 (R) \times 3.14 \times 1.5 (D- \text{make sure to have ft, not inches here}) \times 7.5 = 1272$ gallons

Section B: 9 (D) divided by 2 = 4.5 (R)

$4.5 (R) \times 4.5 (R) \times 3.14 \times 1.5 (D) \times 7.5 = 715$ gallons

Total Spa Volume: 1987 gallons (round to 2000 for ease)