

How To Measure Your In Ground Pool For a New Liner

You should measure your pool completely even if you have the original pool plans. It is not uncommon during pool construction for these dimensions to be varied due to obstacles encountered or changes that were not noted on the original drawing.

It is not necessary to drain your pool to measure for a new liner. Following the process below will allow you to easily measure inside dimensions of the pool.

Take your time. Careful, accurate measurement of your pool will allow us to create a liner that will fit your pool correctly when properly installed. Heed the old rule “measure twice, cut once” to verify that your measurement is recorded correctly.

Consult the shape information that best represents your pool. This will help alleviate failing to capture measurement information that may be unique to the shape of your pool.

All measurements should be taken from the liner bead inside the pool. **Do not measure from the face of the pool coping!**

Please record all measurements in feet and inches. Include fractions of an inch where appropriate.

Refer to the enclosed diagrams for your particular pool shape, if you have a question regarding the points a measurement should be taken from.

Provide actual measurements. Do not be concerned with weather or water temperatures. The manufacturing process will allow for such factors that affect the fit of the pool liner.

Tools needed –

- Standard liner or safety cover measuring form (attached see page____)
- An ink pen that writes in black ink. NO PENCILS
- 50 foot tape measure (larger pools may require 100 foot tape)
- Two yardsticks or other straight boards for measuring corners
- Masking tape or chalk
- “Fishing pole” for measuring pool depth which is comprised of-
 - Telescopic pool pole
 - 20 feet of string
 - Weight for string
- An assistant – measuring your pool will be easier with someone to assist you.

Terms used in this document –

- **Standard shape** – a design that a manufacturer offers a design layout or dig print for.
- **Custom shape** – a design that is unique and may have multiple angles or curves usually requiring a more extensive process called an A-B measurement. Certain standard shapes due to their complexity may also require an A-B point-to-point measurement.
- **A-B measurement** – a point-to-point process of measuring a pool whereby a line outside the pool is established with one end of the line labeled “A” and the other labeled “B”. A series of measurements are taken to numerical points around the pool which allow the liner/safety cover designer to properly proportion the pool perimeter or cover dimensions to the actual design of the pool.
- **Radius** – a curved line or arc of a pool perimeter, pool bottom, or pool step.
- **Diagonal** – 1) a cross dimension that allows the verification as to whether a pool is square. 2) The “cut” of a pool corner which results in it no longer being square.
- **Step Riser** – the vertical portion of a step that connects each step tread to the one above/below it.
- **Bead** – the vinyl piece on the top edge of your liner that holds it to the pool wall.
- **Liner Bead Track** – the slot below the pool coping where the liner attaches.
- **Hopper** – the flat area in the deep end of the pool.
- **Safety Ledge** – a flat area that extends out from the base of the pool wall before the slope begins. This will appear in the deep end of the pool and wrap around to the shallow end.
- **Cove** – a curved area that creates the transition from the pool wall to the pool floor. This is important to note if it is greater than _____ inches in width.
- **Safety Stripe** – a line that is a different color (usually white) from the pool floor. The safety stripe extends across the width of the pool to separate the shallow end from the deep end.

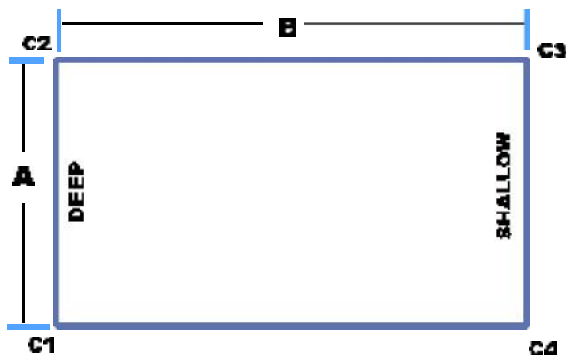
Some Common Liner Measuring Errors

- Failing to use the measuring form for the manufacturer you are ordering from or not completing all of the information for your pool shape. Manufacturers use different terms for pool shapes and also may determine whether the pool is a left or right hand turn based on either the shallow end or the deep end of the pool.
- Assuming the pool was built to the exact specifications that the drawing provided by the builder shows.
- Measuring the wall height and depth incorrectly.
- Measuring the break locations in the pool floor incorrectly.

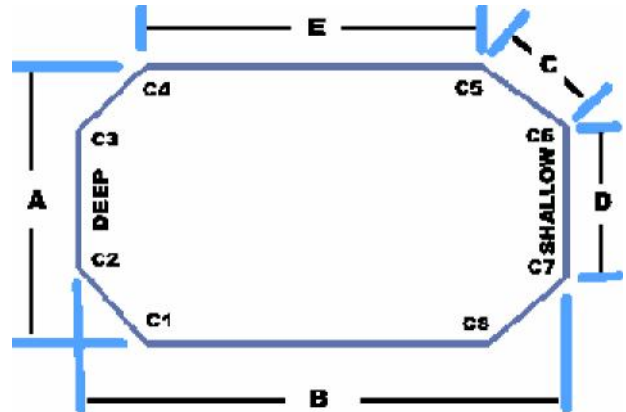
- Using different measuring units such as using just inches on one measurement and feet and inches on another.
- Improperly measuring the pool steps and/or not taking all measurements of the steps including the corners and set back from the pool edge.
- Failing to measure the diagonals on the pool or the perimeter on free-form type pools (kidney, mountain lake, etc.)
- Guessing at measurements.

What shape is the perimeter of your pool?

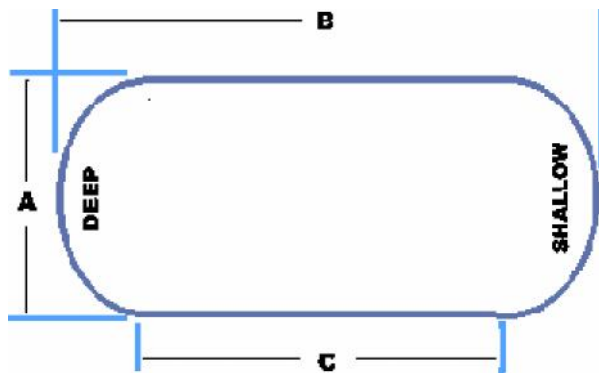
In ground pools come in many standard and custom shapes. Below are icons of the most frequently used standard shapes. Click on a shape below for instructions on measuring that shape. Please match your pool's shape to the drawing as different manufacturers may use a differing name for a particular shape.



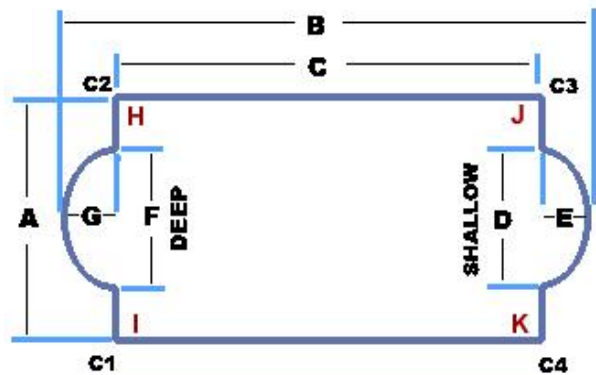
RECTANGLE



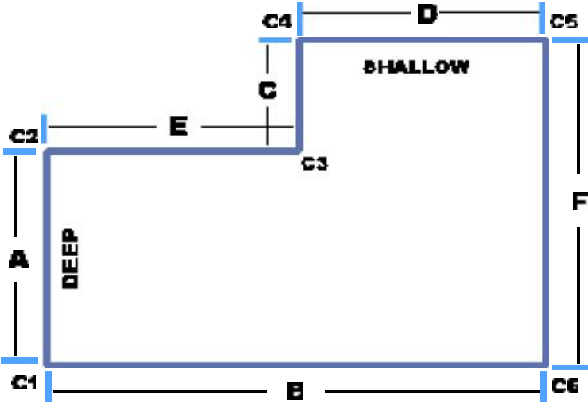
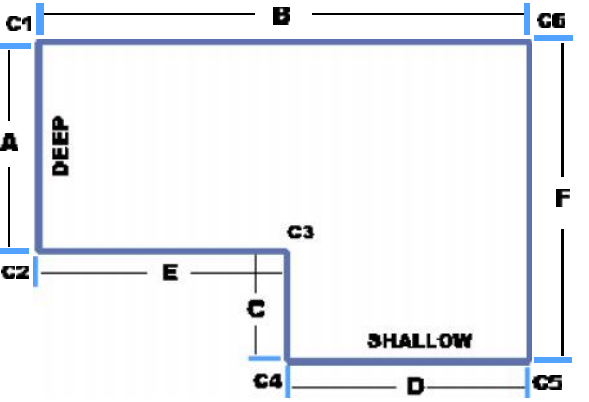
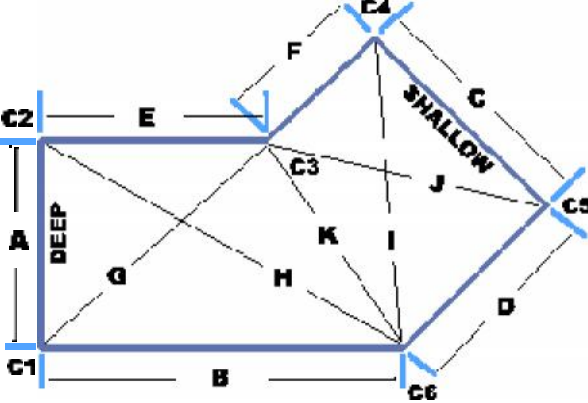
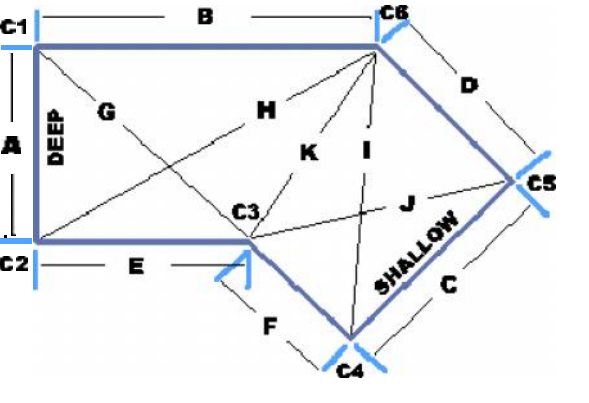
GRECIAN



OVAL (parallel sides)

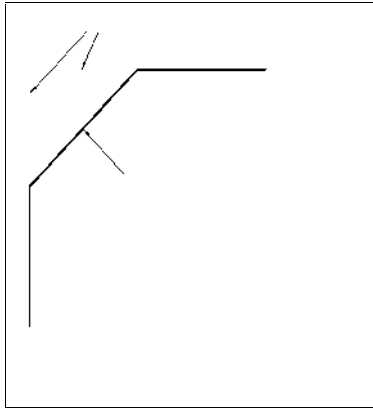


ROMAN

 <p>TRUE L - LEFT</p>	 <p>TRUE L - RIGHT</p>
 <p>LAZY L - LEFT</p>	 <p>LAZY L - RIGHT</p>
<p>Kidney</p>	<p>Humpback Kidney</p>

Measuring diagonal or radius corners.

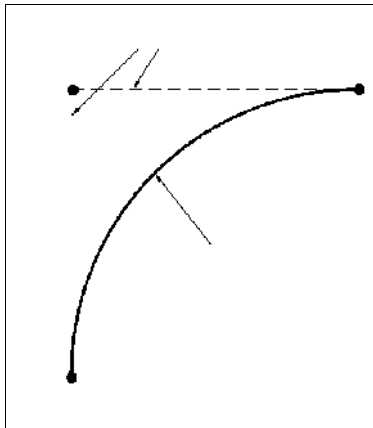
- **Cut or diagonal corners**



Measure from where the straight side wall ends to the imaginary point that forms a square corner. The length of those imaginary lines may be used to verify the length of the cut or diagonal corner using the high school geometry formula $(A \times A) + (B \times B) = C \times C$. The square root of $C \times C$ will equal the diagonal length.

Some common diagonal lengths are 6 inches, 2 feet, 2 feet 10 inches.

- **Rounded or radius corners**



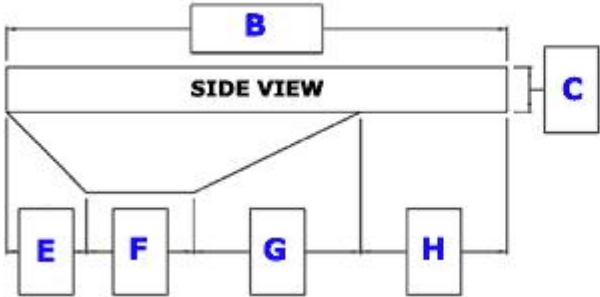
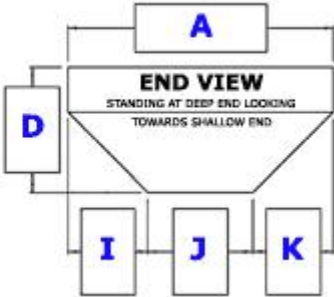
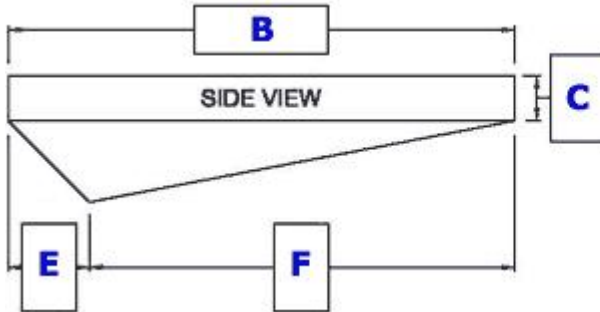
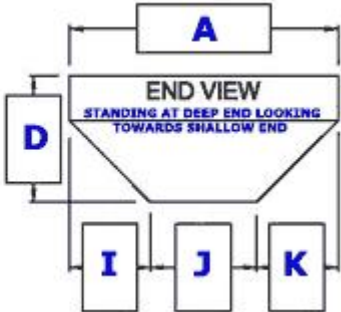
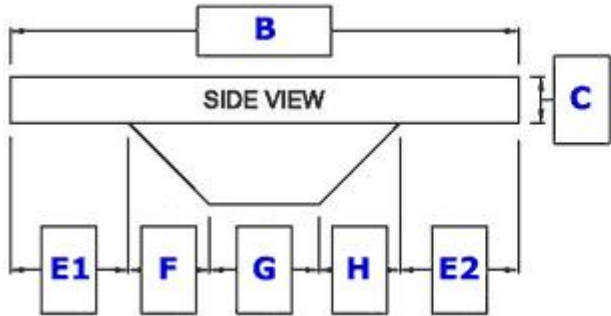
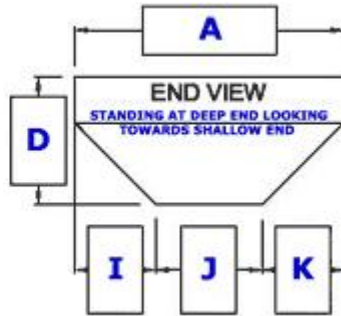
Measure from where the corner begins to the imaginary point that forms a square corner. The length of that straight line measurement will equal the radius of the pool corner.

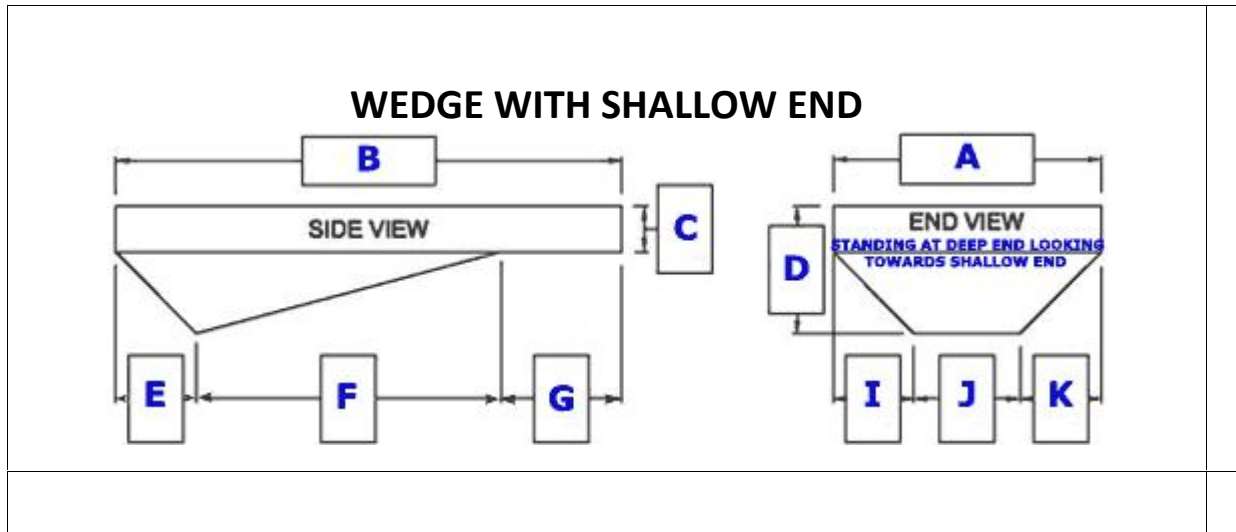
Some common radiuses are 6 inches, 1 foot, 2 feet, and 4 feet.

How to measure the bottom of your pool

Note: all pool depth measurements must be taken from the liner bead track to the bottom of the pool or the liner will be manufactured incorrectly. When the bottom is curved measure from the point where the bottom flattens out and note the curve on the measuring form.

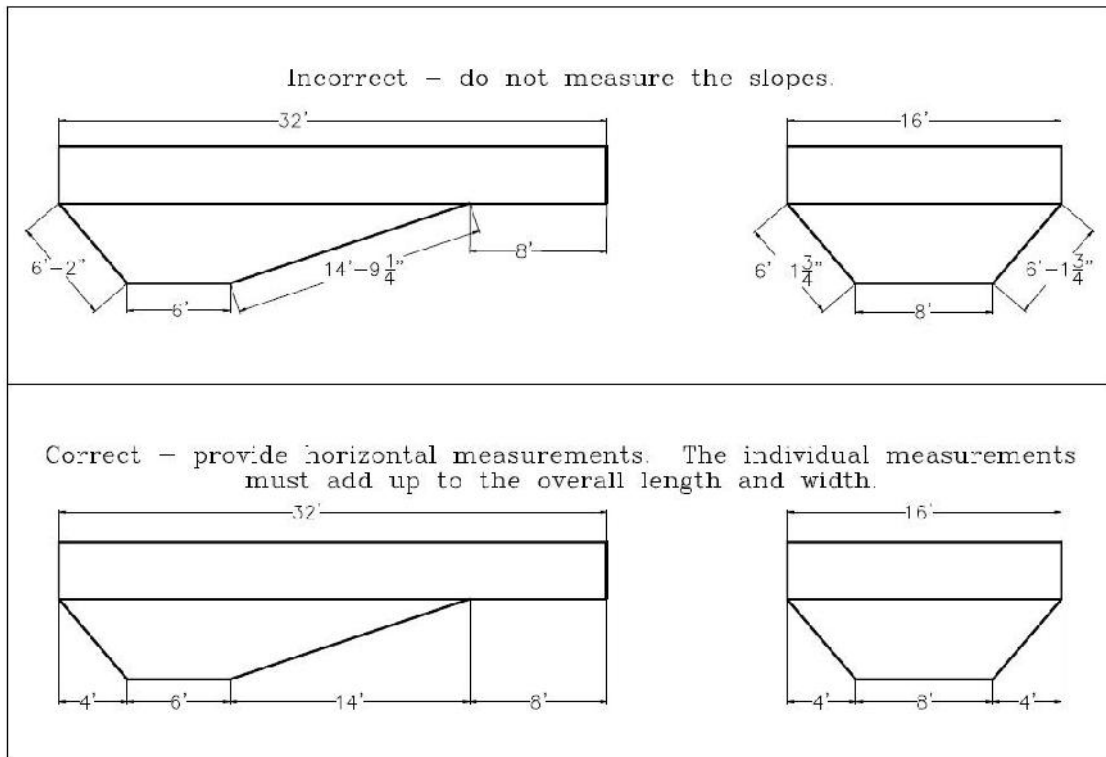
What shape is your pool bottom?

STANDARD	
	
WEDGE	
	
SPORT	
	

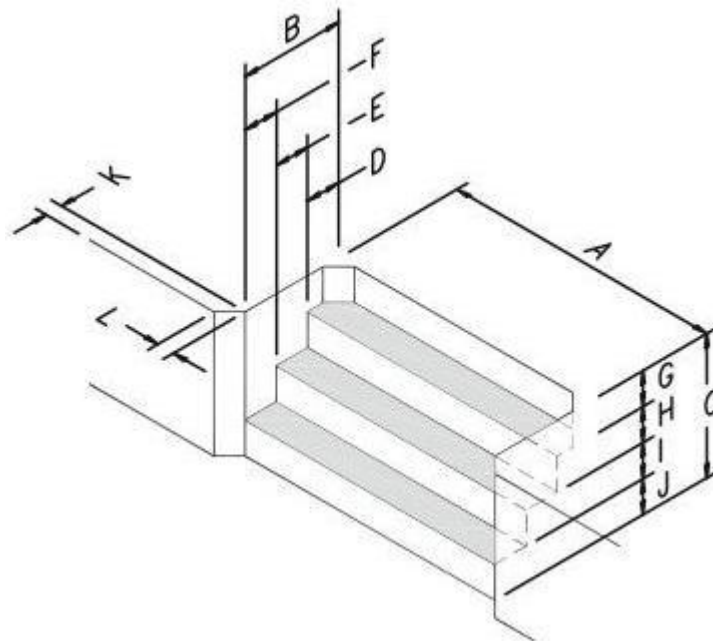


- **“Fishing pole” method**
 - Using your telescopic pool pole, thread the string through the holes closest to the pole end. To one end of the string attach a small weight. A metal washer works well. Make certain the weight has no sharp edges.
 - With the pole lying on the pool deck and parallel to either the pool side or ends, extend the pole out over the pool with the weighted string hanging vertically into the water. Lower the weight and “fish” for the change in depth of the pool bottom. Make certain the string is perpendicular to the pole. Once you have found the contour transition point, measure the distance inside the pool from the string to the liner bead track.
 - To measure depths in the pool, extend the pole out over the pool and “fish” for the depth you are measuring. Measure the length of the string from the water surface to the end of the weight. Add to that measurement the distance from the water level to the liner bead track to determine the total depth.
- **Pole and yardstick method**

- The correct way to measure the slope of your pool bottom.



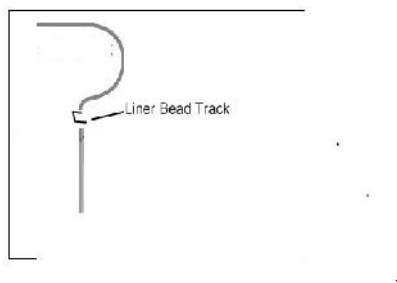
How to measure your pool steps



- **How is the liner attached to the steps?**

- **Rod pockets** – fiberglass or metal rods approximately 3/8-1/2 inch in diameter are inserted through straps or “pockets” on the back of the liner. The rods are then attached to the step riser face using screws. You can feel the rods behind the liner where the pool step tread and step riser intersect.
- **Nailer flaps** – approximately 4 inch wide strips of material are welded to the back side of the step material. These strips are rolled around a wooden lattice strip and attached to the step riser face with nails or screws. You can feel the lattice strip behind the liner at the bottom of the step riser face and just above the step tread.

How is the liner attached to the pool?



- **Standard Bead**
- **Esther Williams bead**
- **Overlap**

Rectangle

- Measure lengths of all sides.
- Measure the pool from end-to-end at the center of the narrow ends and verify that it equals the sidewall length.
- Measure the pool from end-to-end at the center of the long sides and verify that it equals the end wall length.
- Measure the pool diagonally from each corner to opposite corner and compare the two measurements to verify the pool is square.
- Measure corners and note whether they are square, diagonal, or radius. See “Measuring Corners”.

Grecian

- Measure all eight walls of the pool.
- Measure the width of the pool at each end of the straight sides.
- Measure the width at the center of the pool and confirm that it matches the width at each end. If this measurement exceeds the end width by more than an inch, check the width at $\frac{1}{4}$ and $\frac{3}{4}$ the length of the pool.
- Measure the length of the pool at each end of the straight ends.
- Measure the diagonals from corner to corresponding opposing corner.

Roman

- Measure the length and width of the pool sides and ends.
- Measure the pool width in at least two places along the pool length and compare this to the pool end width measurements. These should be equal if the pool walls are parallel.
- Measure the total length of the pool including the bow on the end of the pool.
- Measure all corners including those on the bow.
- Measure the hopper side walls and note the hopper end. Is it radiused or straight?

Oval (sides are parallel)

- Verify that the end of the pool has a continuous radius (rounding). If the end is straight with rounded corners, use the information for a radius rectangle.

- Measure the overall length and width of the pool.
- Measure the pool at the center of the long walls and at each end of the straight portion of the long walls. Verify that these dimensions are equal.
- Measure the radius or curve of the pool end. This may be accomplished by “squaring” the end of the pool as you would a radius corner. The measurement taken from the end of the straight side wall to the corner of this imaginary square is the radius of the pool end.

Oval (sides are not parallel)

- The most accurate measurements of your pool will be obtained by using the A-B measuring process to measure the pool perimeter.
- Measure the overall length of the pool from the center of each end.
- Measure the width of the pool at the widest point of its length.

Round

- Measure the diagonal width of the pool from at least six points.

Octagon

- Measure the length of each of the eight sides of the pool. These should all be equal.
- Measure the diagonals of the pool from several corners to the direct opposite corner. These measurements should be equal if the pool is square. If they vary by more than an inch you will need to perform an A-B measurement of the pool.

Lazy L

- Determine if the pool is a left or right hand “L” by standing at the deep end of the pool. If the extension or leg of the pool is to your left, the pool is a Lazy L – Left. Conversely if the leg is to your right, the pool is a Lazy L – Right.
- Measure the length of all pool walls.
- Measure the width of each end of the pool in several places and confirm that the opposing sides are parallel.
- Measure the diagonals of the pool from each corner to the opposing corner.
- Transfer the measurement of the two short sides of the pool to their opposing long sides to create the equivalent of a rectangle. Measure the diagonals of these two rectangles to confirm that the pool is square.

- Measure the six corners of the pool with particular attention to the inside corner of the L. This corner may be of a different type diagonal/radius than the outside corners.
- Note the shallow end floor break (transition from shallow end to slope to deep end) in the pool. Does the break extend from corner to corner of the pool, or does it extend from the short side corner to a point on the long side wall creating a rectangular deep end.

True L

- Measure the length of all six pool walls.
- Measure the overall length of the pool from the center of the opposing ends.
- Measure the width of the main pool body at the deep end, at midway of the shortest long side, and at the junction with the leg.
- Measure the width of the short pool body at the end, at midway of the shortest, short side, and at the junction with the main body.
- Measure the diagonals from each opposing corner.
- Measure the six corners of the pool with special attention to the inside corner of the L. This corner may often be of a different type diagonal/radius from the outside corners.

Kidney

- The most accurate measurements of your pool will be obtained by using the A-B measuring process to measure the pool perimeter.
- Measure the overall length of the pool.
- Measure the width of the pool at the widest point on each end and at the middle.

Mountain Lake

- The most accurate measurements of your pool will be obtained by using the A-B measuring process to measure the pool perimeter.
- Measure the overall length of the pool.
- Measure the width of the pool at the widest point on each end and at the narrowest point in the middle.

Measuring your pool using the A-B process.

The A-B line must be at least $\frac{2}{3}$ the overall length of your pool.

The A-B line if extended to the length of the pool cannot intersect any part of the pool body.

The A-B line should be a minimum of 3 feet and no more than ____ feet from the edge of the pool body. Both the A point and the B point should be the same distance from the pool edge.

The A-B line should be between you and the pool with Point A to your left and Point B to your right.

Using chalk or masking tape mark Point A on the pool deck. Moving to your right, mark Point B on the pool deck. Measure the distance between Point A and Point B and record the measurement on your measuring form.

Begin at the pool perimeter edge directly in front of Point A, use chalk or masking tape to mark the pool perimeter coping on and number it as Point 1. Working clockwise around the pool repeat the process at 2 foot intervals until you have marked the entire perimeter. In areas where there is a sharp turn or radius in the pool coping, place the marks 1 foot apart.

Have an assistant hold the end of the tape measure at Point A. While holding the other end of the tape, measure from Point A to Point 1. Record the measurement in feet and inches in the A column on the measuring form in the box for A1. Proceed around the perimeter of the pool clockwise and measure all other points and record them in column A in their respective numbered boxes.

When you have completed and verified all of your measurements from Point A, move to Point B and repeat the process. Begin at Point 1 and working clockwise measure from Point B to each of the marks around the pool perimeter.

Choose points at opposing ends of the pool that represent the maximum length of the pool. Measure the distance between the two points and record them on the measuring form.

Choose opposing points at various locations along the pool length. Measure the distance between each set of opposing points and record them on the measuring form. You should seek to capture the greatest width along with the smallest width when doing these measurements.

Mark the pool perimeter at each end of the pool floor slope to the hopper. These marks should be referenced as Point U and Point V. Measure the distance between these points and record them on your measuring form.

Mark the pool perimeter at each end of the pool floor break from the shallow end to the floor slope to the hopper. These marks should be referenced as Point X and Point W. Measure the distance between these points and record them on your measuring form.

Using either method for measuring the pool depth, measure the depth at differing points around the pool to properly reflect the changes in pool depth. Record those measurements on your measuring form.