



Unravelling the Mystery of Shoe Sizing

Not confusing whatsoever...

Adult Mens and Womens Shoe Size Conversion Table

M/W indicates Men's or Women's Sizes. Other systems are for either gender.

System		Sizes																System
Europe		35	35½	36	37	37½	38	38½	39	40	41	42	43	44	45	46½	48½	Europe
Mexico							4.5	5	5.5	6	6.5	7	7.5	9	10	11	12.5	Mexico
Japan	M	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27.5	28.5	29.5	30.5	31.5	Japan M
	W	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	27	28	29	30	31	Japan W
U.K.	M	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	10	11	12	13½	U.K. M
	W	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	9½	10½	11½	13	U.K. W
Australia	M	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	10	11	12	13½	Australia M
	W	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	10½	11½	12½	14	Australia W
U.S. & Canada	M	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	10½	11½	12½	14	U.S. & Canada M
	W	5	5½	6	6½	7	7½	8	8½	9	9½	10	10.5	12	13	14	15.5	U.S. & Canada W
Russia & Ukraine *	W	33½	34		35		36		37		38		39					Russia & Ukraine W
Korea (mm.)		228	231	235	238	241	245	248	251	254	257	260	267	273	279	286	292	Korea
Inches		9	9⅛	9¼	9⅜	9½	9⅝	9¾	9⅞	10	10⅛	10¼	10½	10¾	11	11¼	11½	Inches
Centimeters		22.8	23.1	23.5	23.8	24.1	24.5	24.8	25.1	25.4	25.7	26	26.7	27.3	27.9	28.6	29.2	Centimeters
Mondopoint		228	231	235	238	241	245	248	251	254	257	260	267	273	279	286	292	Mondopoint



Did you know?

Shoe sizing/fitting is so challenging that even Millennials prefer to purchase shoes in person as opposed to online.

No Standardization

- It is not by accident
 - Manufacturers spend a lot of money to develop a unique “fit” of their shoe. If it was standardized, it’d be easy to copy.
 - Lasts are a core component of the protected design
- Shoes fit differently from different factories.
- Manufacturing methods and materials affect fit.

Who Cares?

- Running shoes
 - Sport-specific athletic shoes
 - Therapeutic/comfort footwear
-
- It has been demonstrated repeatedly that consumers do not care about the fit of dress/fashion footwear.

Who Cares?

- Both running shoe and therapeutic shoe companies invest massive amounts of research, time and money into the development of a shoe.
- Fashion/dress shoe companies have to keep up with (or ahead of) changing trends.
 - Fit is not a concern.
 - Concerns are looks, making the shoes as cheaply as possible and getting new styles out every 3-6 months.

It all starts with the last

- Molded generic model of foot around which the shoe is built.
- Separate last is needed for L/R of each size and width combination.
- Each set costs between \$250,000-\$300,000



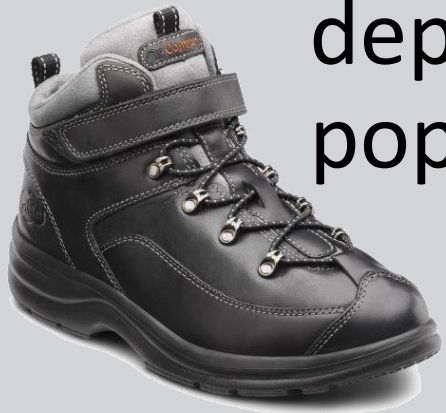
Lasts

- In 1880, Edwin Simpson created the first “standard” set of lasts (in full sizes).
- Length: 1 size = $\frac{1}{3}$ inch

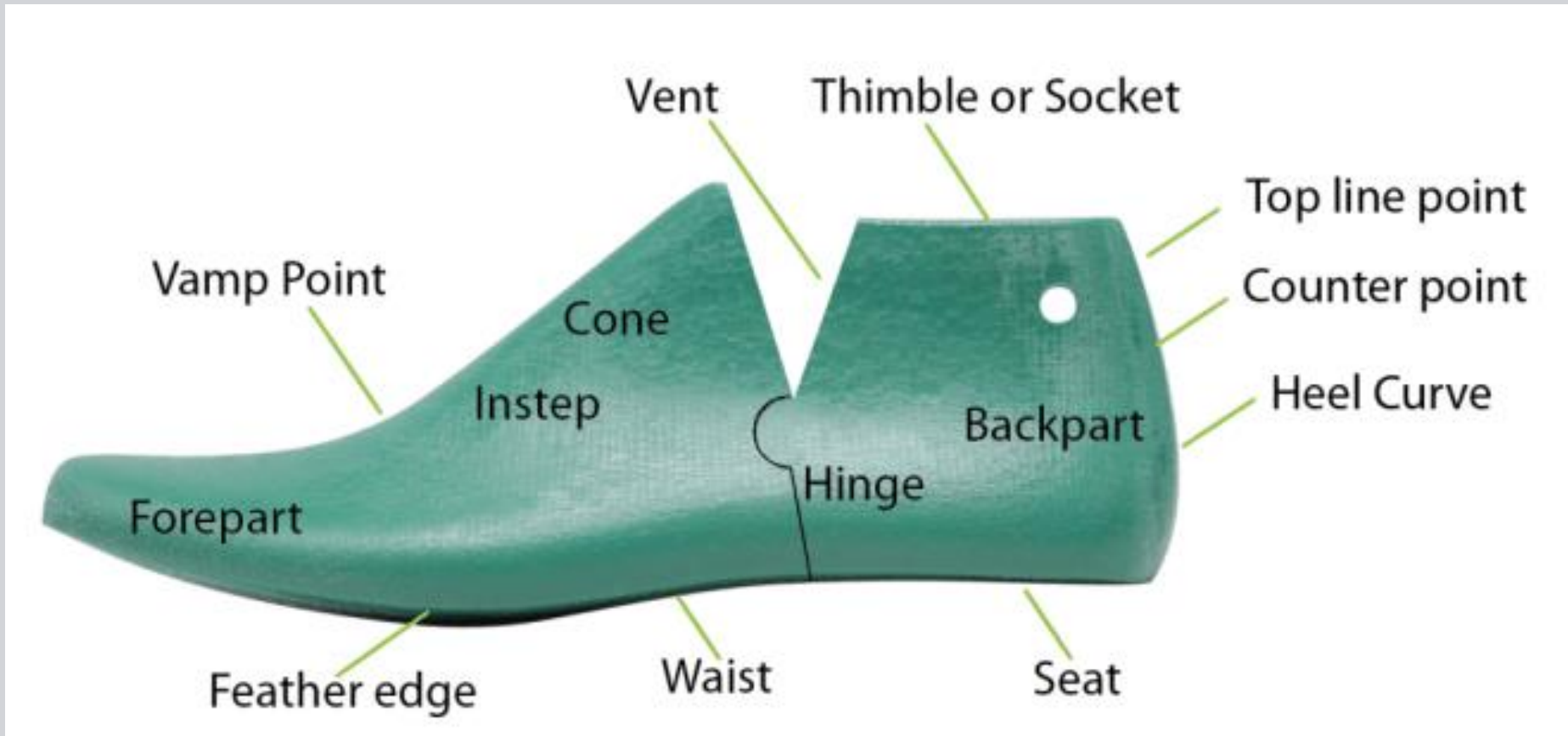


Lasts

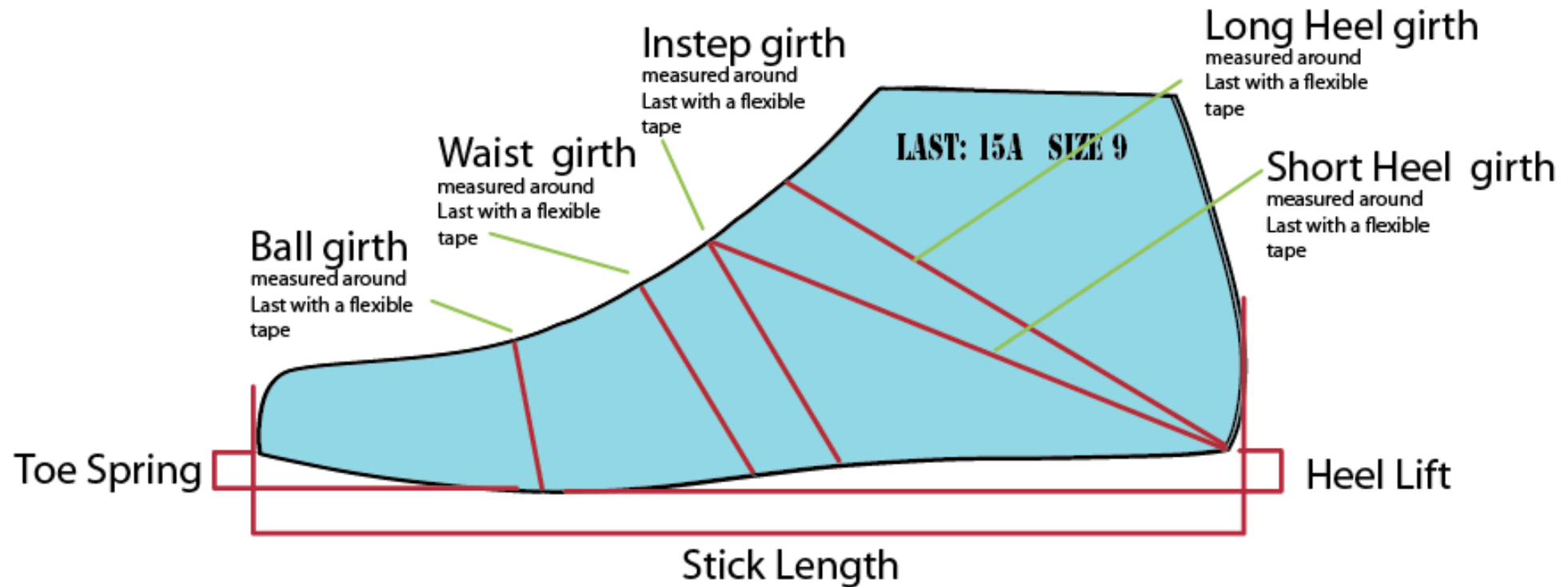
- Vigor
 - 4 widths, 16 sizes
 - 108 separate lasts/set
 - Need 1-3 sets depending on popularity of shoe



Anatomy of a Last



Last Measurements

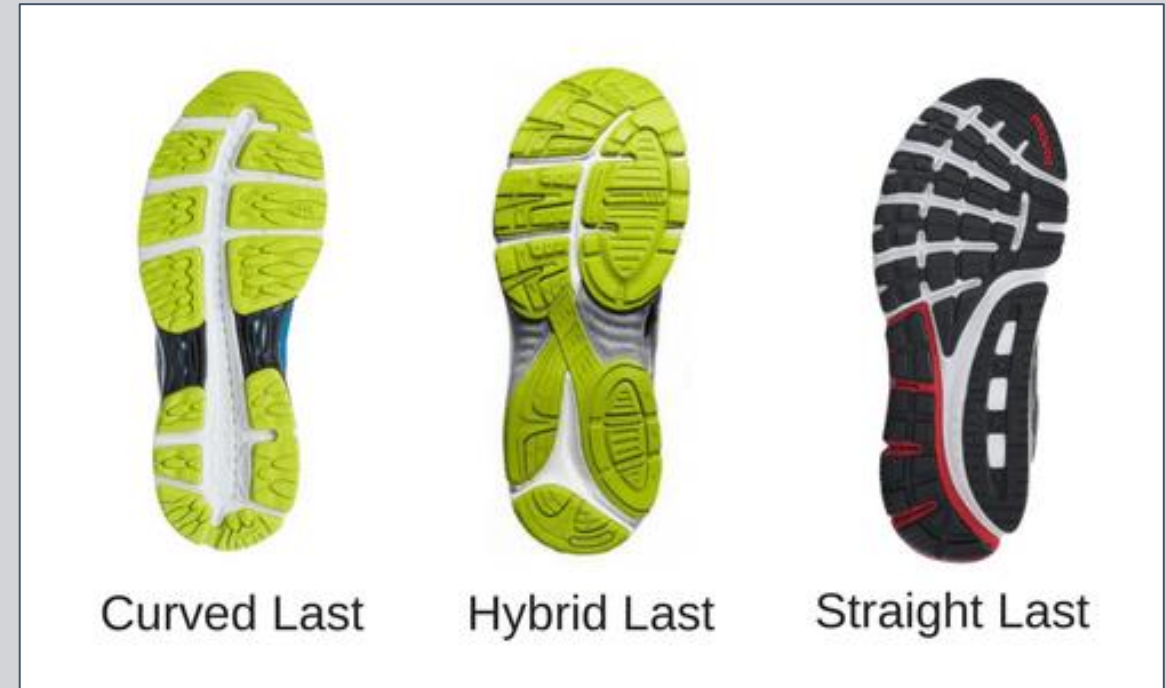


Last Modifications



Specialty Lasts

- Straight lasts
 - *True* straight last shoes, little or no difference Left to Right



Running shoe last terminology

Specialty Lasts

- Combination lasts
 - Narrower last in hindfoot, wider last in forefoot



Lasts

- Lasts of different dimensions and shapes fit differently.
- Fit the shoe to the foot, not the foot to the shoe.
- Dr. Comfort uses four different men's lasts and five different women's lasts.



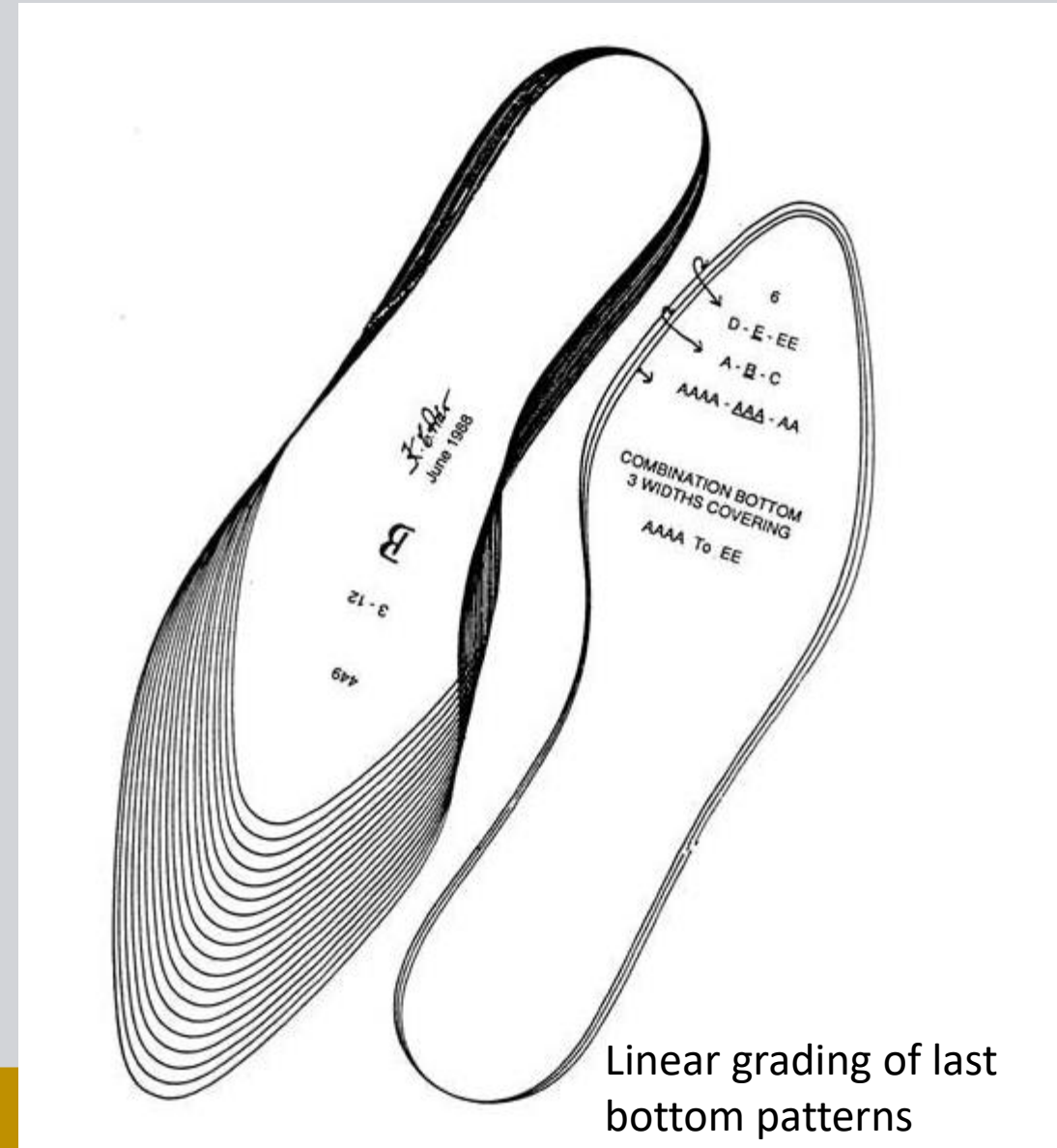
New Balance

- 11 different last “types”
- 13 Unisex lasts
- 12 Men’s lasts
- 12 Women’s lasts
- 6 Kids’ lasts
- 43 Total Different Lasts

LAST TYPES					
SL Straight Last	CL Confort Last	AL Athletic Last	RL Racing Last	JL Junior Last	NR Non-Running Last
PL Performance Last	SD/KD Soccer Last	SD/KD Sandal Last	NL Natural Last	PW Performance Wide Last	
FIT-FORM	ACTIVITY	HEEL WIDTH	INSTEP HEIGHT	TOE BOX HEIGHT	FOREFOOT WIDTH (VOL.)
MEN'S AND WOMEN'S LASTS					
RL-2	Distance Racing	Narrow	Standard	Standard	Standard
RL-3	Road/Trail Racing	Narrow	Standard	Standard	Wide
RL-4	Running	Narrow	Standard	Standard	Wide
SL-2	Running/Walking	Narrow	High	Deep	Wide
NATURAL PL-1	Running	Standard	Standard	Standard	Standard
NL-0	Running	Standard	Low	SHALLOW	Wide
NL-1	Running	Standard	Low	SHALLOW	Wide
PL-0	Running	Standard	Standard	Standard	Standard
PL-1	Running	Standard	Standard	Standard	Standard
PL-4	Running	Standard	Standard	Standard	Standard
PW-1		Anatomical	Low	Reduced	Wide
VL-6	Running	Standard	Standard	Standard	Standard
TSL-1	Team	Narrow	Standard	Standard	Wide
WOMEN'S ONLY LASTS					
SL-1	Running/Walking/Cheering	Standard	Standard	Standard	Standard
RL-1	Speed Racing	Standard	Standard	Standard	Standard
AL-2	Walking/Court/Training/Outdoor	Standard	High	Deep	Standard
CL-2	Walking/Court	Standard	High	Deep	Wide
WWL-1	Walking	Narrow	High	Standard	Standard
CW-2	Walking	Standard	Standard	Standard	Standard
CW-3	Walking	Standard	Standard	Standard	Standard
NL-2	Walking	Standard	Low	Standard	Standard
WB-001	Basketball	Standard	High	Standard	Standard
WX-001	Training/Tennis	Standard	Standard	Standard	Standard
WDL-1	Hiking	Narrow	High	Deep	Wide
PL-6	Running	Standard	Standard	Standard	Standard
MEN'S ONLY LASTS					
SL-1	Running/Walking	Standard	Standard	Standard	Standard
RL-1	Racing	Standard	Standard	Standard	Standard
AL-1	Court/Training/Outdoor/Basketball	Standard	Standard	Standard	Standard
SD-1	SANDALS	Standard	Standard	Standard	Standard
CL-1.5	Walking/Court	Standard	High	Deep	Standard
MB-001	Basketball	Standard	High	Standard	Standard
MX-001	Training/Tennis	Standard	Standard	Standard	Standard
MF-001	Football/Baseball/Lacrosse	Standard	Standard	Standard	Standard
MF-002	Football	Standard	High	Deep	Wide
CL-1	Hiking	Narrow	High	Deep	Wide
CW-1	Walking	Narrow	Standard	Standard	Standard
CW-5	Walking	Standard	Standard	Standard	Standard
KIDS' LASTS					
JL-1	All-purpose	Standard	Standard	Standard	Standard
KD-1	Soccer	Standard	Standard	Standard	Standard
KD-1	SANDALS	Standard	Standard	Standard	Standard
JL-NR	Court/Training/Outdoor/Basketball	Standard	Standard	Standard	Wide
JL-2	All-purpose	Standard	Standard	Standard	Standard
KFA-1	Fashion/Athletic	Narrow	Standard	Low	Low

Lasts and Soles

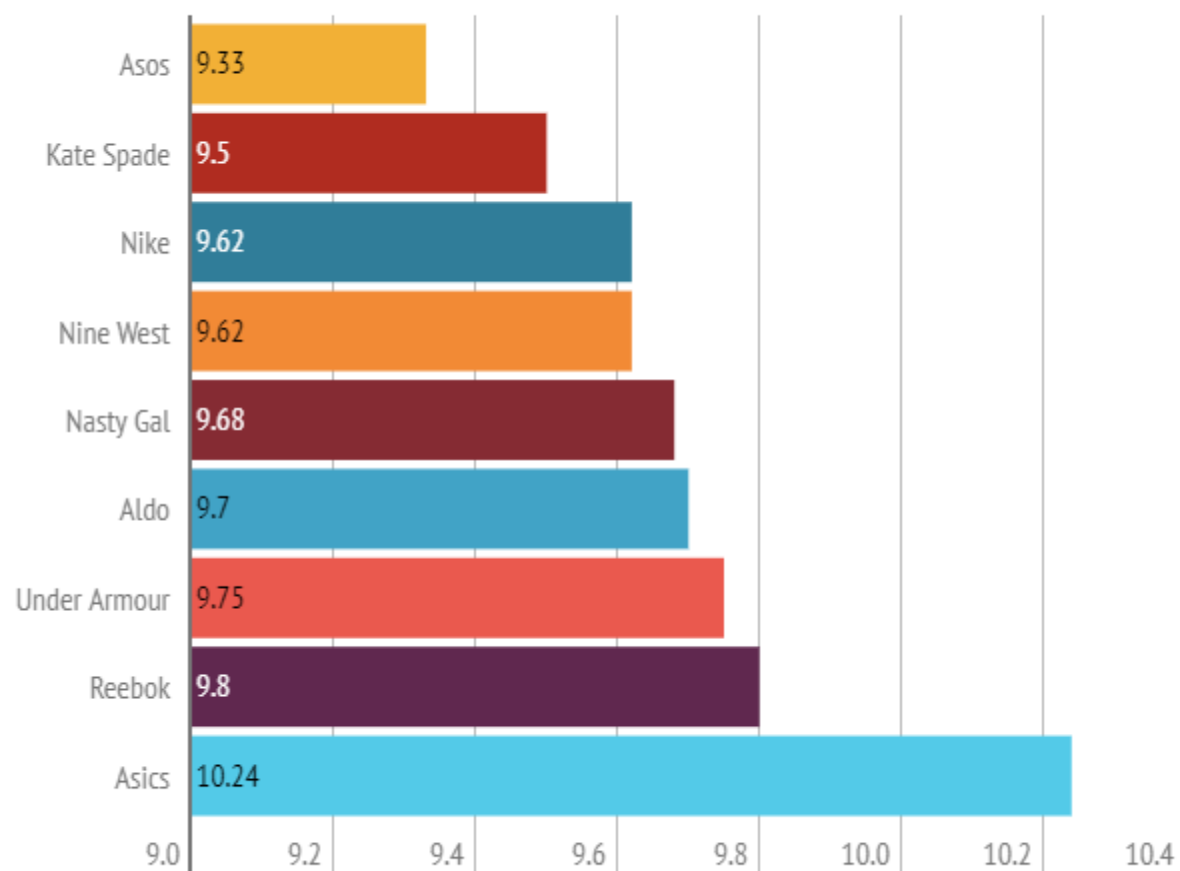
- Many manufacturers use the same bottom unit (sole) for multiple widths.



Measurements to Consider

- Last length
 - Linear length of last at its longest point
 - Shoe length
 - Theoretically, internal length should be the same as last length, but factors like upper material and method of construction influence this
 - Foot length
 - Ideally, should be 3/8"-1/2" shorter than last/shoe length
 - Shoe size
 - Who knows...
- Example:
 - My foot length is 10.5"
 - I measure a 10 on the DRC Brannock® device
 - I wear a size 10 in the Ruk shoe.
 - Inside length of that shoe is 11.25"
 - Why?
 - Our men's dress last has a longer, tapered toebox.
 - There is a little extra room in front of my foot, but the ball of my foot is in the right spot *and* I do not have neuropathy or balance/proprioception issues.

Length of Size 8 Shoe in Inches



Sources: Company Websites

Fascinating Foot Fact

- According to the American Orthopaedic Foot and Ankle Society (2008), 9 in 10 American women wear their shoes too small (1 in 4 men).
- 8 in 10 women report that their shoes cause foot pain.
- 7 in 10 women will develop a painful foot deformity that is caused by, or made worse by, ill-fitting shoes.
- In fact, more than 80 percent of women said they were willing to give up the health of their feet for trendy footwear, according to a recent study by the American Podiatric Medical Association.



Ritz Stick

- Developed in 1913, patented in 1916.
- First device to attempt to provide standardized foot measurements.
- Manufactured by American Automatic Devices Co.
- In 1988, they modified it to add women's sizes.



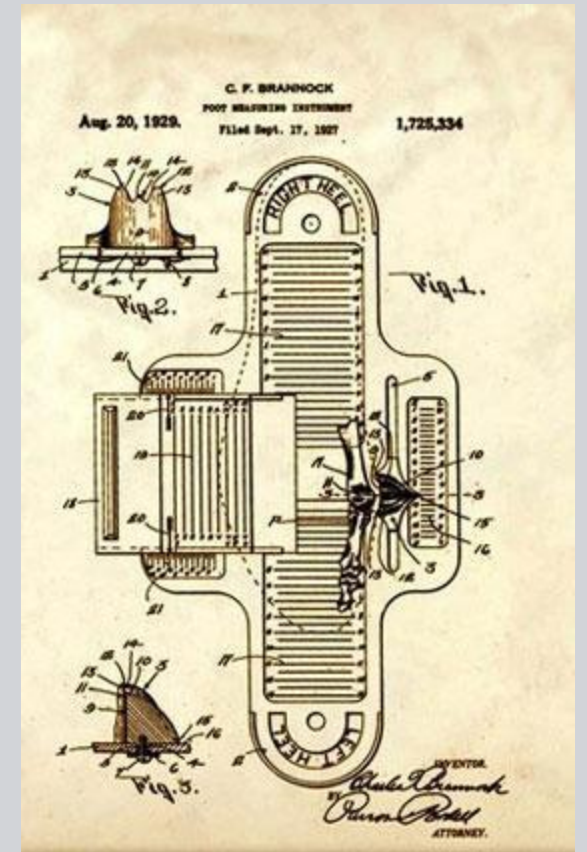
The Brannock Device®

- Charles Brannock developed the device while attending Syracuse University in 1925. Patented in 1926.
- Device first used in his father's shoe store in downtown Syracuse.
- No one else in NY could fit shoes as well as Park-Brannock Shoe Co.!



The Brannock Device®

- The formula used by the Brannock device assumes a foot length $\frac{2}{3}$ in (1.7 cm) less than the length of the last.
- Men's size 1 is equivalent to a foot length of 7.66"
- Women's sizes are one size up.*
- Formula:
 - Men's shoe size = (3 x foot length in inches) – 22
 - Women's shoe size = (3 x foot length in inches) – 21

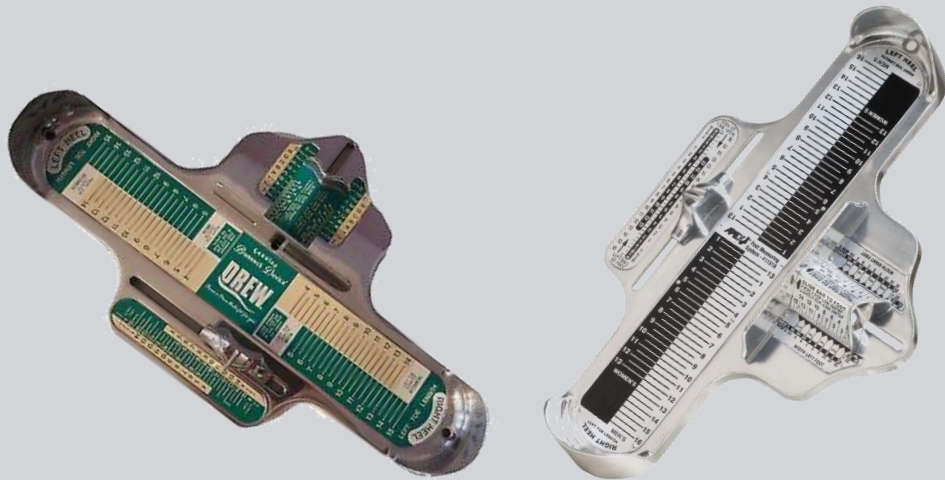


The Brannock Device®

- Brannock uses three measurements
 - Heel-to-toe
 - Heel-to-ball
 - Width
- No other foot measurement tool uses all three.
- This is the key to proper fit.

Manufacturer-specific Brannock Devices®

- If you're going to fit more than one brand, you need more than one Brannock®.



US/UK Shoe Sizing System

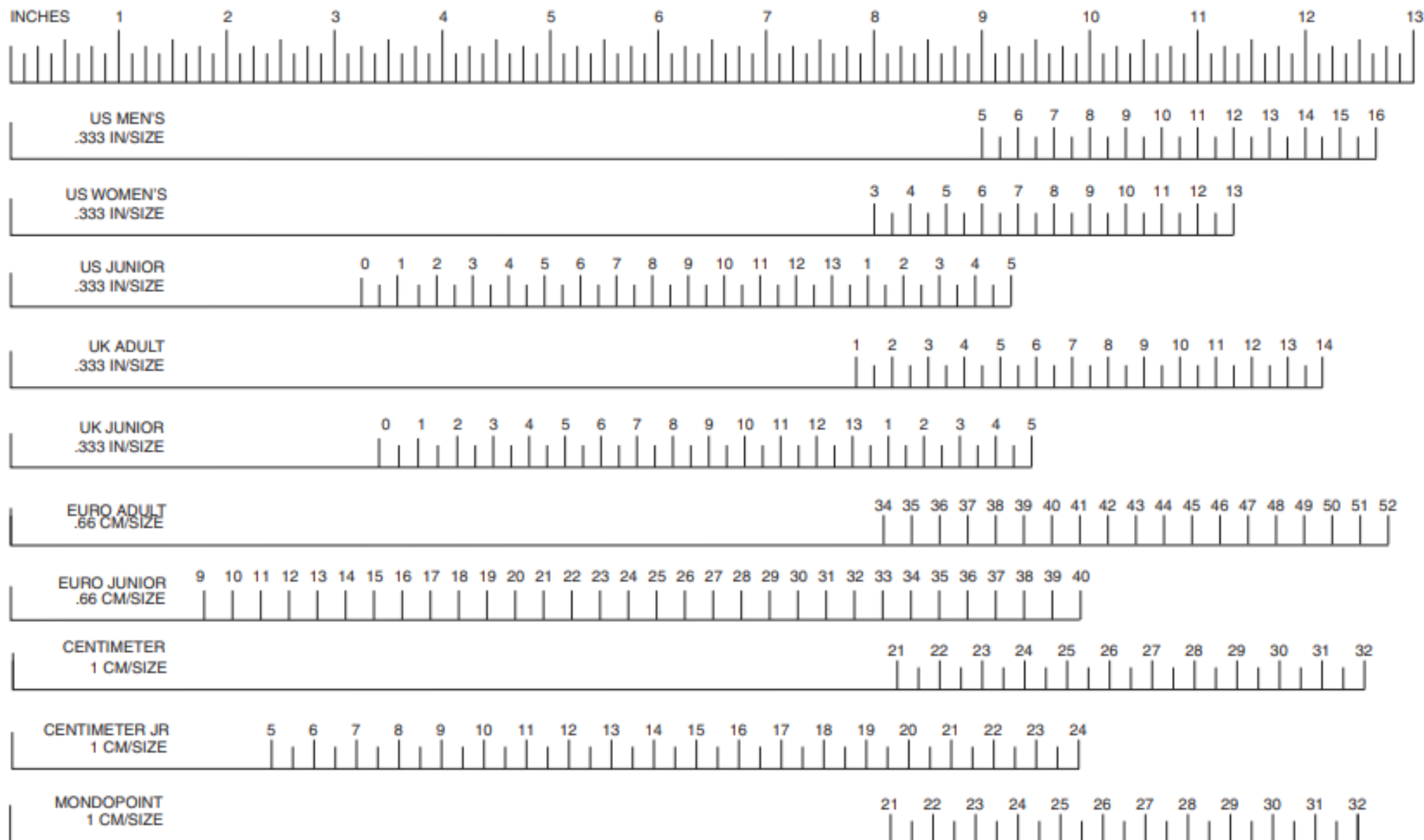
- In 1324, King Edward II of England decreed that the standard English inch would be three barleycorns laid end-to-end.
 - *Three barley-corns, round and dry, make an inch, twelve inches a foot, three feet a yard, five and a half yards a perch, and forty perches in length and four in breadth an acre.*
- This is the basis for current UK and North American shoe sizes, with the largest shoe size taken as twelve inches (a size 12) and then counting backwards in barleycorn units, so a size 11 is 11.67 inches.



Common Shoe Sizing Systems

- US – 1/3" between sizes
- UK – 1/3" between size
 - Half size longer than US
 - US 8 = UK 7.5 = 10.5" (In theory...)
- Euro (Continental European System)
 - Used in most European countries, Brazil, Hong Kong and many Middle Eastern countries
- Mondopoint
 - Metric measurement of foot
 - Ski boots, skates, ballet pointe shoes, NATO
 - Russia, China, Japan, South Korea, Taiwan

Size Comparison of the Standard Model Brannock Device Foot Measurers



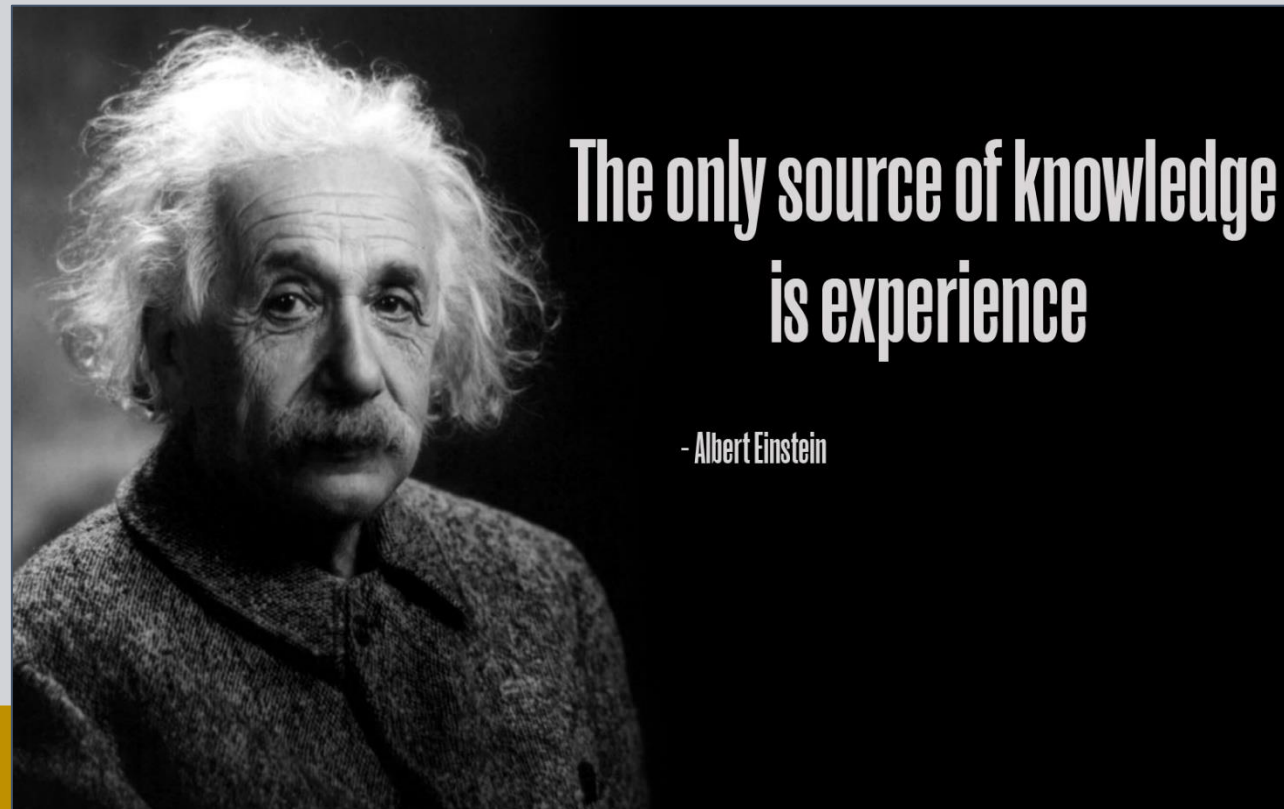


Try Shoes On!



Conclusion

- In order to properly fit shoes...you have to fit shoes. *A ton* of shoes!



Thank you