

A defence of the Imperial System

Pre-ramble

I am, unfortunately yet unapologetically, British. America receives a lot of flak for ‘not yet switching to metric’ — despite the fact that they actually *have* ‘switched’ to metric in the legal sense — and in my opinion it’s us who get away with the same, if not worse, behaviour.

In America, it’s very obvious what you should be measuring your stuff in; the measurements may be hard to follow or not make obvious sense to one, but one should always be able to identify *which* measurement is used. Britain has none of this. In the UK, every single thing you can think of has its own unit[1], there is **no** sweeping ‘all liquids are gallons’ rule or anything of the like. For example: soft drinks are sold by the litre, milk is sold by the pint. Draught beer and cider can be sold by the pint, but all other alcohol must be sold by a specific subset of amounts millilitres.[2] Bottled/canned beer and cider can never be sold by the pint, but rather ‘568ml’. All of these rules for alcohol are outlined in the Weights and Measures act.

‘Weights and Measures’ is mostly known in British culture as ‘those rozzers[3] who come in to pubs checking that a shot is actually a shot’.

All of this is to say that my relationship with units of measurement has been, on paper, rough. In practice none of this matters, and it comes to British people the same way that grammatical gender comes to those native to languages that have it. This section of the post is purely contextual for the landscape I’ve grown up in (and ultimately gotten used to) regarding the units of measurements of stuff.

Introduction

The metric system is obviously better than the imperial system, and I at no point will be arguing otherwise. It succeeds in its goals of being an international standard, it is easy for everybody to understand, and it allows the base of everything ever to be either water or the size of the earth itself[4]. I have even written at length in the past about metrics use cases on the road, in an old script that I may write up as a blog post sometime in the future.

I also believe that the ‘Imperial Units of Measurement’ get a very bad wrap, and in some cases undeserved animosity. Whilst it as a single system isn’t ideal for every day use, that doesn’t mean that every single time a unit of measurement from it is used, that unit of measurement is automatically bad — an opinion held by many people the world over. Okay, mainly just Europe—over.

First things first, a couple of definitions and disclosures:

- Whenever I mention the ‘Imperial System’, I’m talking about the United Kingdom’s imperial system of measurement. The real Imperial (as in Empire) system of measurement. This is the one referenced in UK law, including but not limited to the prior mentioned Weights and Measures act.
- Unless stated otherwise, I am not talking about the US Customary Units. This is the ‘imperial’ system used in the United States, and has become what non-brits think is the ‘imperial’ system.
- The ‘Imperial System’ is **not** one set of units. As put by Jan Misali — the writer of an excellent source I found whilst writing this piece — it’s a family of slightly different systems with a common origin.

If it’s a family rather than a system, then “is the imperial system any good?” isn’t a question with an answer. The only question you can actually ask is whether a given unit is any good, one at a time. So let’s do that, starting with the one Britain defends most fiercely.

Culture, and The Pint.

Let me tell you a tale of the pint in British law.

The pint is the **only** unit of measurement that Britain has gone out of its way to protect in law. The pint is not simply a legacy unit that nobody got round to killing, this is a unit that the country actively chose and has a huge stake in the culture around here. In 2024 the UK got a new government. After around 14 years of populist right wing nut jobs, the extremely boring socially-left-of-centre, fiscally-right-of-centre Keir Starmer took hold with his Labour party. At the time of the election, satirical journalist Johnathan Pie called the new prime minister '50 shades of beige, captain white bread.' on a piece with the New York Times.

It felt fake, therefore, when this government tried to get involved with the 'culture' of the UK. The opposition saw this as an opportunity to get a dig at them.

In early 2025, the pint was recognised in law in a seemingly controversial way. The vehicle was the Product Regulation and Metrology Bill, a piece of legislation so dry that its own scrutiny committee complained it was a skeleton. Buried in it was a power for a minister to decide, by statutory instrument, which units of measurement may be used and what sizes goods may be sold in — along with a power to amend the Weights and Measures act to match. The Conservatives — those 'right wing nut jobs' that had just been beaten in their worst defeat ever, and gagging for some positive press — spotted this and claimed the government intended to ban pubs from selling pints. It did not, and everybody involved knew it did not, but a Bill that could theoretically touch the pint is close enough to a Bill that bans the pint if you want a headline.

What followed was an almost satirical chain of events that need not concern us in this post, but essentially lead to the three biggest parties in the UK arguing on the best way to preserve the pint. An afternoon of the House of Lords competing over who loved beer the most. They all agreed that 'the pint' was a direct extension of British culture, and should be protected by law, it was the *how* that took so long to resolve.

Eventually, the result is that the pint is now protected by statute, ministers may not restrict its use for draught beer, draught cider, or milk in returnable containers.

Here's the kicker: In order to protect our most imperial of imperial units, the enduring symbol of a nation that refuses to be told what to do by continental Europe, Parliament had to write down what a pint actually is. They defined the pint as 0.56826125 cubic decimetres.

But who cares! 'The Pint' was saved, even if it didn't need saving.

But this isn't a political post, at least it's not meant to be. So let's ask the actual question using this cultural knowledge as part of the evidence. Ignore the heritage and the Lords and the flag-waving. Is the pint a good unit to use? I think it is, and for the same reason the mile is: because nobody ever 'measures' with it. It's just a handy word that people understand the meaning of.

The Pint isn't and shouldn't be treated as a volume, it's a *serving* of beer or cider. When you order one, the number '568' does not enter your head, and neither does any other number. "A pint of Guinness" is a complete instruction — it tells the bartender the drink, the vessel, the price bracket, and the amount in three words. There's no arithmetic anywhere in the transaction, and everybody is happy.

And when you do need less than a full one, the pint divides in exactly the ways a drinker actually wants. A half. You could have a third or two thirds, as mentioned earlier, but I'd genuinely really argue that nobody needs that. Even if they did, every one of these legal measures is a phrase rather than a sum — nobody has ever ordered "189 millilitres of bitter". A litre divides beautifully into tenths, which is brilliant! But it's a property of no use whatsoever to a man deciding whether he's got time for another before the train.

There's something else the pint does that no other British unit manages: it's physically embodied in the object you're handed. The glass itself is the measuring instrument, stamped and verified, and you can see whether

it's full. You don't have to trust a scale or a pump or a label. Every other unit in this post is an abstraction printed on something, where the pint is a thing you can hold up to the light and check.

Meanwhile, underneath, the whole thing runs on metric anyway. Alcoholic strength is a percentage by volume. The units of alcohol printed on the side of a can (the ones the NHS wants you to count) are calculated from millilitres of ethanol. A pint of four percent beer is around about 2.3 units, and that number was produced by doing metric arithmetic on 568 millilitres. Nobody in the pub does that sum, and nobody has to, because not only has the sum already been done and printed, every beer is different! Having ordinary people do maths to calculate their units would be silly.

Legal and health stuff, metric. Regular people? Imperial. Not only is it culture, it also just makes sense. Some things just are because they are, and asking for 'a pint' is one of these things.

This is the same pattern as the road! The imperial unit is the interface, the metric is the implementation. This 'imperial interface' survives purely because it was never really doing the job people assume units do.

It also survives because I'll be old and grey before brits give up the word 'pint'.

Miles and Yards.

There are many, many reasons why metric units of measurement are better than imperial ones on the road. As I mentioned earlier, I have already researched and written about why the UK should switch to metric on our roads — but these arguments are really quite obvious and you've heard them a million times from a million people. Let's talk about the usability and strength of the mile on the road.

The United Kingdom uses Miles and Yards on their road signs; whilst the American's may be infatuated with feet, over here it's the yard that won out. It's entirely crucial to mention though that miles and yards, and feet for that matter, **never mix**.

This can be difficult to fathom for those who don't use the system. I feel as if many people who have only ever used metric sort of *assume* that people use yards or feet as a smaller division of the mile. This just isn't true, and would be really silly. You wouldn't ever say

"The distance between Manchester and Sheffield is 38 miles and 1,410 yards"

because that doesn't make any sense whatsoever. I have **no** idea how many yards are in a mile. I don't know how many feet are in a mile. These conversions just simply aren't relevant, and this is obvious to any British or American reader of this post! They are simply two/three different units that we have. If you think that's just me being thick, I can assure you that it isn't. In 2013 YouGov asked people how many yards there are in a mile and gave them ten seconds to answer. Three quarters of them couldn't do it.[5]

That statistic comes from the campaign group 'Metrication UK', a group of people who want the roads switched to metric, and they cite it as proof that the system has failed. Whilst I agree with them on many points and arguments, I'd actually argue that this proves the opposite. Three quarters of British drivers cannot convert between the two units we use on our roads, and the roads work anyway — because at pretty much no point in a journey does anyone need to.

If you needed that level of precision, you would say

"The distance between Manchester and Sheffield is 38.8 miles."

and this is reflected on our road signs. Britain uses *fractions* on it's signs. Something can be $2\frac{3}{4}$ miles away, something can be $\frac{1}{2}$ mile away. The 38.8 example earlier would appear as '39 miles' on our road signs, it's not necessary to ever be that precise on a highway[6] sign.

So, why use miles over kilometres? I've genuinely got a really good reason and you're gonna have to hear me out on it. It's by total accident, and it's all to do with how long an hour happens to be and how fast 60mph happens to be.

The national speed limit on a single carriageway road in Britain is 60mph. Sixty miles per hour. Sixty minutes in an hour. Which means that out on an A road, one mile takes one minute, exactly, and you don't have to work that out because it isn't a conversion — it's the same number twice! A sign saying 'Buxton 24' is also a sign saying 'Buxton, twenty-four minutes'. Nobody taught me that. Nobody teaches anyone that. You just absorb it after enough journeys, and from then on every distance sign in the country is quietly telling you the arrival time as well.

It holds up at the other limits too, roughly. Thirty in a town is two minutes to the mile. Whilst it's true that you can go up to seventy on a motorway, that's still fifty-one seconds if you do the maths, which any sane person rounds to a minute. So across every road in Britain, a mile is somewhere between one and two minutes, and mostly it's one.

Now try that with kilometres! A hundred kilometres an hour, which is the standard limit on a French or Spanish main road, gives you thirty-six seconds per kilometre. Thirty-six. It's not wrong, it's just kinda useless and crappy for this kind of job. Objectively. Nobody is estimating a journey in thirty-six second chunks, so you end up doing actual division, which is exactly the thing metric is supposed to save you from.

The mile is not defensible on its own. They are useless for many reasons, many reasons that Metrication UK will point out and many reasons that I agree with. Miles are only good because they come with miles per hour.

The unit is fine and the unit of speed is fine, but what's actually good is the pair because together they hand you distance, speed and time in a single number with no arithmetic in between. Break the pair and you lose it. If we switched to km/h and kept the mile, or the other way round, the whole thing collapses immediately. If you switch both you end up like France and Spain.

Which is why, incidentally, the argument doesn't extend to the rest of the road. Fuel is in litres and always has been, but efficiency is inexplicably in miles per gallon, a unit describing a gallon that no petrol station in the country has sold since before I was born. Bridge heights are in feet and inches, and also in metres, on the same sign, because getting that one wrong writes off a lorry. British roads are not coherent and I'm not going to pretend they are! I'm making a much smaller claim. Of everything on the road, the mile is the one imperial unit that earns its place, and it earns it because of the company it keeps.

So the mile isn't good because it's a mile, far from it. A 'mile' is actually quite hard to learn if you didn't grow up with it. It's good because of the accident of arithmetic it fell into, and because that accident happens to hand you the one number a driver actually wants. It's the same shape as the pint, arrived at from a completely different direction; The pint works because it's a serving rather than a volume, the mile works because it's a minute rather than a distance. Neither of them is doing the job we're told units are for, and both of them survive because of it.

Stone, and their British dominance.

I'll be honest, this section will be hard for me to write. I don't like the stone as a unit of measurement, I don't like the pound as a unit of measurement. Pounds are better but, still not ideal. I've been using kilogrammes[7] my entire life and don't plan on changing now.

But Stone does have it's place in society and it's *only* to do with talking about *change* of weight. One stone is roughly 6.35 kilogrammes, or precisely 14 pounds. Stones are only used for the weights of people, never the weights of ingredients or produce, or even the weight of live farm animals. Only humans. And whilst I can't *prove* this is why it stuck around, I think the stone survived *because* it's a coarse unit of measure.

Daily weight fluctuation is natural and normal, it can be attributed to water weight caused by water retention by sodium and carbohydrates. [According to healthline.com](<https://www.healthline.com/health/weight-fluctuation>) this can be around 2.2 to 2.7 kg per day. If someone was to weigh 60kg, I'd imagine it would be pretty hard to tell when their weight changes to 62kg, or 58kg. However, the consensus that I have heard a *lot* from people

who use stone day-to-day, is that the minute somebody who weighs 60kg gains to 66 or 67 kg, it's much easier to notice.

Daily fluctuation is the noise floor, a kilogramme sits **below** that floor — so a kilogramme of change tells you nothing! It could be salt, could be water, could be what you had for dinner. A stone by contrast sits *well* **above** it, so a change measured in whole stones cannot be noise, it is necessarily real.

This isn't speculation about perception, it's only maths against that 2.2-2.7kg figure! "I've lost a stone" is a claim that survives the measurement error, whereas "I've lost two kilos" isn't. This is why 'losing a stone' is a big deal, it's why one is an announcement and the other is a shrug, and it's why I believe many many people in the UK use stone as a unit of measure in everyday speech. Just like the pint, it doesn't really matter what a stone *actually* equals. Just the fact that you have 'lost two stone' is notable and understandable by the person who you're talking to.

Now it is true that if somebody is talking about their full weight, they're likely to say "eleven stone four", so the unit people report their weight in is really the pound, which is finer than the kilogramme, and my whole coarseness argument should collapse... Except it doesn't, because those are two different jobs. Stones and pounds are how you say where you are. Whole stones are how you say what's changed. Nobody has ever announced that they've lost nineteen pounds; they say they've lost a stone and a bit, because the stone is the bit that means something and the pounds are the bit that moves on their own overnight.

Again, just like the pint and lesser so the mile, the 'stone' doesn't need to *mean* anything. Nobody knows that a stone is 6.35 kilogrammes, at least I didn't until I researched for this. But I do know that gaining or losing a stone is a noticeable change, and people around here understand that.

Inches, and their global dominance.

The inch is genuinely cool. So far I've been talking about how Britain is a tad quirky, but it all works out in the end. Inches?? Inches won globally. I'm so serious even if you're reading this from a nice metric country where you always use millimetres or centimetres, it's likely that many things in daily life are based on **whole** amounts of inches. The inch won here, it just might be reported in a decimal conversion.

As a "computer scientist" — a far too fancy term that doesn't actually describe what I do, I'm a software student — the example I go to is servers. Server racks are 19 inches wide! Not only in Britain or America, everywhere. Every data centre from Hong Kong to Honduras, from Moscow to Miami, from Aberdeen to Abu Dhabi[8] is built around a 19 inch opening, and the vertical space in them is measured in rack units of precisely 1.75 inches each (which is why a server is described as "1U" or "2U", and why those numbers have no relationship to anything metric.) The entire physical infrastructure of the internet is dimensioned in a unit that most of the engineers maintaining it have never used for anything else in their lives.

Or, okay, look at a circuit board. The standard header pin spacing is one tenth of an inch. The whole industry writes this as 2.54mm, which is exactly one tenth of an inch, because (in my opinion) 2.54mm sounds like a design decision and 0.1 inch sounds like an admission. Every breadboard, every Arduino, every ribbon cable connector on earth is built on that pitch, with 0.1inches between every pin.

Or, elsewhere, look at hard drives! They're usually either 3.5 or 2.5 inch. Screens are sold by the diagonal inch in every country in the world regardless of what that country uses for anything else — you can't ever buy a '140cm television'. Camera sensors are generally measured in inches.[9] Car rims and bike wheels are measured in inches. And planes? Aviation flies on feet as an international standard. Today only China, Mongolia, North Korea, and parts of Russia and Tajikistan are working in metres.[10]

Why? Because in aviation getting it wrong — for lack of a better term — kills people, and the thing that stops you getting it wrong is everyone using the same number. It doesn't matter in the *slightest* whether the foot is a

good unit. It matters enormously that the aircraft, the altimeter, the chart, the controller and the aircraft three thousand feet above you all agree.

That's my argument; much different to the pint or the mile. Those survived because of how they feel to use. The inch survived because of lock-in, an admittedly much less romantic reason yet a much more powerful one. Once a million racks are 19 inches, **the 19 inches has stopped being a unit and become a shape**. You can't argue a shape into being 500mm. You'd have to replace the racks.

Any software engineer reading this might even recognise this pattern immediately, because it's the same reason we're all still dealing with QWERTY, and CSV files, and time zones. The standard that wins is never the best one. It's the one that got there first and got copied enough times that changing it costs more than living with it. I think I have an entire blog post worth of thoughts about QWERTY.

Feet are, actually, a really good scale.

In the olden times, nearly every culture that needed to measure things arrived at a set of units based on the body. Because the body is the one measuring instrument everybody owns, and nobody can leave at home or pretend that they didn't have the correct equipment to measure their things at market, "anthropometric" systems of measuring became entirely normal and incredibly useful.

None of these were accurate, but that mattered far less than you'd think. If you're pacing out a field boundary or a ship's rigging, being within a few percent is fine, and being able to do it at all with no equipment is worth much more than being exactly right. The precision came later, when trade and then engineering demanded it, and by then everyone had spent a thousand years or so thinking in units the human body happened to produce. This means that yes, while the 'foot' is a silly name for things, and Americans often receive a lot of flack for naming length in 'feet' (Britain receives much less flack as we often use centimetres or yards for length), it leaves the foot as a really nice measurement to use.

Today, whilst it's obviously larger than an average human's foot; at around 30 centimetres the metric system doesn't have anything close to it. A metre is about three times bigger and a decimetre is about three times smaller. Whilst these are, fine, the foot was designed with measuring human-sized things in mind, which can be incredibly useful. In metric, due to the power of 'ten' prefixal naming conventions, you jump from a decimetre at 10cm to a metre at 100cm. Most human sized things fit in that gap.

The benefit to this? It's not that a foot is 'natural' or that it feels nice, that's just a story. The benefit is objective arithmetic-free reading! Everything at human scale lands between one foot and about thirty. A doorway is 7 foot. A ceiling is 8. A room is 12 by 14. A sofa is 6. A person is 5 or 6. That's the whole of domestic life expressed in small whole numbers, in one unit, with no decimal point anywhere. Now say those in metric. The ceiling is 2.4 metres, or 240 centimetres — pick one, they're both slightly awkward, and whichever you pick you'll be switching to the other one within about a minute because a doorway is 2.1 and a person is 180. You end up sliding between two units and a decimal point to describe the inside of a house.

And the second benefit follows from the first: because the unit came off a body, you can measure with your body. If you want to know whether the sofa fits, you can pace the room heel to toe and get an answer within a few percent, right now, with nothing in your hands. Try pacing a room in decimetres.

Metric units are only ideal when they can be measured with tools and written down. Just talking to a person, saying an integer number of feet is much easier to understand than even an integer number of centimetres. Knowing how long one foot is, give or take, it's not difficult for somebody to imagine three feet or four feet, and allows for imprecision because this is human communication.

The moment you're building something or working out clearance space, British people switch to millimetres or centimetres. It's only ever metric that gets written down for serious stuff, the way it should be.

‘Miles per gallon’, and the case against me.

I've spent this whole post picking the units that work, so it's only fair I pick the one that doesn't.

Fuel efficiency in the UK is measured in miles per gallon. Petrol is sold in litres and has been for decades, the gallon hasn't been a legal unit for selling fuel in this country since the mid 90s, but there's evidence of garages switching far before that.

It was as early as 1981 that petrol stations *could* display metric if they wanted, and many did as the price of petrol had risen to more than £1.99 per gallon. This was important, as many analogue meters back then physically couldn't display a higher price. Switching to the litre, which was smaller and therefore cheaper per unit, allowed a smaller number to be displayed without needing to replace every meter. Smart!

There are also accounts from the time that garages were more than happy to change to the litre, as it made their prices *look* cheaper. It was at the time that garages — or more accurately the shops within them — absolutely **hated** the idea of switching to kilogrammes over pounds as this would make the price per unit increase, and therefore *look* more expensive.

Anyway, both of these together saw a gradual transition to litres throughout the 80s. The Energy Institute statistical series says that their records changed from “new pence per gallon” to “new pence per litre” at the start of 1989, and selling petrol by the gallon become illegal entirely by New Years Day of 1995.

So what are we left with? A measurement of fuel consumption expressed as a ratio to a unit that has been illegal to sell fuel in for thirty years. To find out what a journey actually costs, you have to convert mpg into something involving litres, because the number itself doesn't connect to anything you can buy.

It's also, objectively, the wrong way round. Miles per gallon gets bigger as consumption gets smaller, which flattens exactly the differences that matter. Going from 20mpg to 25 saves you more fuel over a year than going from 50 to 60 does. The physical numbers say the opposite as a 10pt difference should save you *more* than a 5pt difference, but that's just not how the maths work out. That *actually* means that you can go three times **less** per gallon.

Over 10,000 miles: 20 to 25mpg saves 100 gallons, 50 to 60mpg saves 33 gallons.

That is, bullshit. Every metric country uses litres per hundred kilometres, which is the same measurement inverted, and inverted is correct. And before you write this off as a leftover we're stuck with, we did the same thing again this century. Electric cars in Britain are quoted in miles per kilowatt hour. An imperial unit of distance over an SI unit of energy, invented from scratch, in the 2020s, by people who had every opportunity to do literally anything else. It's even the same shape of mistake. A bigger number means less energy used, with the same flattening at the top.

There's no defence available here, every other unit in this post passed a test that this one fails: it did something useful for the person actually using it, something the metric version wouldn't have done as well. Miles per gallon does nothing for anybody. It's a ratio between a unit we use and a unit we abolished, and it isn't easier to say, easier to picture, or easier to act on. It's just what we happened to be using when we stopped paying attention.

Conclusion

So, should we switch to metric?

Yes, obviously we should. I said at the top that the metric system is better and I meant every word of it. If Britain switched everything tomorrow, the roads and the pubs and the scales and the lot, we'd be better off within a generation, and the transition would cost less than the arguing about it already has.

But I don't think that's the interesting question, and I don't think it's the question people are actually asking when they laugh at us either. Every unit in this post that survived, survived for a reason, and not one of those reasons was heritage. The pint is a serving. The mile is a minute. The stone is coarser than the noise. The inch is a shape. The foot works for humans because it's literally based on the human body!

What none of them survived on is arithmetic. Not one of these units is any good at being converted, and it turns out that being good at being converted was never the job. That's the job of the numbers underneath, and underneath, every single one of these is already metric. The pint is 0.56826125 cubic decimetres because Parliament said so, and the number was sitting in the Weights and Measures Act long before anyone thought it needed 'saving'. The inch is 25.4 millimetres exactly, and has been since 1959. Even the mile is defined in metres!

Britain went metric decades ago. We just kept the old words for the bits where a human being is standing at the end of the transaction.

Which is why I think we get a worse press than we deserve. It looks like a country that couldn't finish the job. It's closer to a country that finished the job underneath and kept the interface it already knew how to use. That isn't a defence of the imperial system, because the imperial system as a system is indefensible and I haven't *tried* to defend it once. It's a defence of about six words that happen to still be the best way of saying certain things out loud.

Metric is what gets written down. Imperial is what gets said.
I'd switch tomorrow. I'd still ask for a pint.

Further reading

This blog post has mainly been about culture and lightly linguistic. For a more mathematical defence of the imperial system, consider watching <https://youtu.be/iJymKowx8cY> by Jan Misali.

On miles per gallon, autocar has a brilliant post about the struggles of fuel efficiency in the UK. Consider reading <https://www.autocar.co.uk/opinion/anything-goes/buying-fuel-litres-measuring-efficiency-gallons-makes-no-sense> by Kris Culmer.

Footnotes:

[10] Source: https://en.wikipedia.org/wiki/Flight_level#Metre_flight_levels or <https://avgeeks.aero/insights/why-do-some-countries-use-meters-instead-of-feet-in-aviation/> or <https://skybrary.aero/articles/metric-altitude-reference>

[9] Camera sensors use the word inches, and then explicitly **aren't** that size. Being a legacy of vidicon tube diameters, a 1 inch sensor is about 16mm across. https://en.wikipedia.org/wiki/Image_sensor_format
https://en.wikipedia.org/wiki/Video_camera_tube

[8] <https://youtu.be/KXmpdJO9UOc&t=50>

[7] Kilogrammes! Not kilograms, as you may have expected me to write. Both options are valid British English, so take your pick. As somebody who writes 'programmes' and 'dialogue', it's only natural that I continue the trend here.

[6] Yes, we use the word highway. A highway over here is any road the public has a right to pass along, so, basically every road, including the footpath outside your house. Our rules and regulations for the road are called 'The Highway Code', fun fact.

[5] The survey was commissioned from YouGov by the UK Metric Association in 2013. As far as I can tell the raw tables aren't public, so every citation of the 76% figure traces back to UKMA's own write-up rather than to YouGov directly. Their phrasing is that 76% of respondents (and 95% of 25-39 year olds) were unable to answer correctly or at all, which is a slightly softer claim than getting it wrong. Worth noting that UKMA's own conclusion from the same data is that knowledge of unit ratios is poor in both systems, with metric only marginally better understood; which I'd argue helps my case rather than theirs.

<https://ukma.org.uk/publications/still-a-mess/> and <https://metrication.uk/transport/roads/distance-signs/>

[4] The metre was meant to be one ten-millionth of the distance from the equator to the north pole, but the survey it was based on was slightly wrong, so it never actually was that. It doesn't matter now, because since 1983 the metre has been defined by the speed of light, and since 2019 the kilogramme has been defined by the Planck constant rather than by a lump of metal in a vault in Paris. Which means metric is no longer based on water or the earth at all. Every base unit is now an arbitrary scaling of a universal constant chosen to land near the value people were already using. Imperial units are defined in terms of metric ones so they inherit exactly the same footing.

[3] 'Rozzers', an insulting British term for the police.

[2] The rules properly:

Spirits: only gin, rum, vodka and whisky are actually regulated, and a pub must pick either 25ml or 35ml as its single measure and use it throughout the premises, with a notice up saying which. A double is therefore 50ml or 70ml depending on the house. 35ml is mostly a Scottish thing. Tequila, brandy and everything else isn't covered at all, so there is legally nothing stopping a bar selling you a pint of sambuca.

Wine by the glass: 125, 175 or 250ml, or multiples of those. Fortified wine like port or sherry is 50 or 70ml.

There are no specified quantities for sparkling wine by the glass.

Draught beer and cider: a third, a half, two-thirds, or multiples of half a pint. The two-thirds only became legal in 2011 and most pubs still don't serve thirds.

Packaged beer and cider: no specified quantities whatsoever, which is why you can buy a 440ml can. The 568ml on a bottle is convention plus the labelling rules, not a size requirement.

All of this applies only to alcohol; you can sell a quarter-pint of Coca-Cola if you fancy.

- Liquids (in general) are measured in **litres**.
 - Milk and beer are measured in **pints**.
 - Baby milk is measured in **fluid ounces**.
 - Wine by the glass is measured in **millilitres**. By the bottle is **centilitres**.
 - Soft drinks are measured in **millilitres**.
 - Fuel efficiency is measured in miles per **gallon**, it should be noted that engines, petrol tanks, and petrol itself is measured in litres.
- Weight (in general) is measured in **kilogrammes**
 - The mass of ingredients is measured in **grams**, unless the mass of the ingredients fits nicely into **table spoons**, which take priority.
 - The weight of people trying to lose weight is measured in **stone**.
 - The weight of people trying to gain weight is measured in **killogrammes**.
 - Gym equipment is measured in **killogrammes**, unless **pounds** is a nicer number – we tend to understand both in a gym context.
 - Newborn babies have their weight in **pounds and ounces**, though most hospitals record in kilogrammes and do a conversion.
- Distance is measured in **miles**, speed is measured in **miles per hour**.
 - Distance cycling is usually measured in **kilometres**.
 - Distance walking is usually measured in either, or both, but usually **kilometres**.
 - Rail speed limits are measured in miles per hour. HS1 and most light rail services (Metrolink, the Tyne and Wear Metro, and the DLR) use **kilometres** per hour.
 - Area of houses are measured by real-estate agents in **square feet**
 - Area of houses are measured by apps and websites in **square metres**
 - Area of farmland when measured by farmers is in **acres**
 - Area of farmland when measured by a legal body is in **hectares**
 - Mountain heights on the map are in **metres**
 - Mountain heights by legal bodies are in **feet**
 - A 'four by two' of timber is sold at 47x100 **millimetres**.
 - Every sport you can think of has their own rules.