on the top or side, in legible figures or letters ; and all mea­sures of capacity shall have their contents stamped or mark­ed on the outside in legible figures and letters.

The stamping of weights entirely composed of lead or pewter, or of any mixture thereof, is prohibited ; but no­thing herein shall prevent the use of lead or pewter, or any mixture thereof, in the manufacture of weights, if these are wholly and substantially cased with brass, copper, or iron, and legibly stamped or marked “ cased or shall prevent the insertion of such a plug of lead or pewter into the weights as shall be *bona fide* necessary for adjusting them, and receiving the impression of the stamp. Nothing here­in shall require any single weight above fifty-six lbs. to be inspected or stamped, nor any wooden or wicker measure used in the sale of lime, or other articles of the like nature ; or any glass or earthenware jug or drinking cup, though re­presented as containing the amount of any imperial mea­sure, or of any multiple thereof; but any person buying by any vessel represented as containing the amount of any im­perial measure, or of any multiple thereof, is authorized to require the contents of such vessel to be ascertained by comparison with a stamped measure, to be provided by the person using such wooden or wicker measure, glass jug, or drinking cup, and if such comparison be refused, or the measure be found deficient, the person using the same shall be liable to the penalties imposed on those using unjust weights or measures.

The following is a tabular view of the weights and measures, according to the present state of the law, throughout the British empire. In some of the colonies, however, and particularly in India, a variety of other weights and measures besides is still in use, as will be noticed in the sequel. It is only necessary to ob­serve, that all the quantities in the same horizontal line of the same table are equal to each other.

*Troy Weight.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Grains.** | **Dwts.** | **Oz∙** | **Lb.** |
| **24** | **1** |  |  |
| **480** | **20** | **1** |  |
| **5760** | **240** | **12** | 1 |

*Apothecaries' Weight.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Troy Grains.** | **Scruples.** | **Drams.** | **Ox.** | **Lb.** |
| **20** | **1** |  |  |  |
| **60** | **3** | **1** |  |  |
| **480** | **24** | **8** | **1** |  |
| **5760** | **288** | **98** | **12** | **1** |

In these two weights the grain, ounce, and pound are the same. The troy is used for the precious metals and for jewels, as also in trying the strength of spirituous liquors, and for comparing dif­ferent weights with each other. Four grains troy make a carat. But this terra when applied to gold denotes its degree of fineness. Thus, the weight of any quantity or compound of that metal being supposed to be divided into 24 equal parts, if the mass be pure gold, it is said to be 24 carats fine. If it consist of 23 parts of pure gold and 1 of alloy, it is said to be 23 carats fiue, and so on. Diamonds and pearls are also weighed by carats of 4 grains, but 5 diamond grains are only equal to 4 troy grains. This sort of weight is not very different all over the globe. There are 150 diamond carats in the troy ounce. Apothecaries' weight is chiefly used for medical prescriptions; but drugs are mostly bought and sold, especially in wholesale, by avoirdupois weight.

*Avoirdupois or Commercial Weight.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Troy Graine.** | **Drams.** | **Ox.** | **Lbs.** | **Stones.** | **Qrs.** | **Cwts.** | **Ton.** |
| **437·5** | **16** | **1** | **...** |  | **...** |  |  |
| **7000** | **256** | **16** | **1** | **...** |  |  |  |
| **98000** | **3584** | **224** | **14** | **1** | **...** | **...** | **...** |
| **196000** | **7168** | **448** | **28** | **2** | **1** | **...** |  |
| **781000** | **28672** | **1792** | **112** | **8** | **4** | **1** |  |
| **1568t)000** | **573440** | **35840** | **2240** | **160** | **80** | **20** | **1** |

The above lb. of 7000 troy grains was formerly subdivided into 7680 avoirdupois grains, 10 of which made a scruple, 30 a dram, and 480 an ounce. The troy pound is less than the avoirdupois in the proportion of 144 to 175, or of 14 to 17 nearly ; but the troy ounce is greater than the avoirdupois in the proportion of 192 to 175, or of 79 to 72 nearly.

*Measures of Length.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Inches.** | **Links.** | **Feet.** | **Yards.** | **Pole or Perch.** | **Chains.** | **Fur­longs.** | **Mile.** |
| **7·92** | **1** |  |  |  | **...** | **...** |  |
| **12** | **1·515** | **1** |  |  |  | **...** | ... |
| **38** | **4545** | **3** | **1** |  |  | **...** |  |
| **198** | **25** | **16·5** | **5·5** | **1** | **...** | **...** |  |
| **792** | **100** | **66** | **22** | **4** | **1** | **...** |  |
| **7920** | **1000** | **660** | **220** | **40** | **10** | **1** |  |
| **63360** | **8000** | **5280** | **1760** | **320** | **80** | **8** | 1 |

Three inches make a palm, 4 inches a hand, 5 feet a pace, and 6 feet a fathom. In cloth measure, 2¼ inches = 1 nail 4 nails = 1 quarter, and 4 quarters = 1 yard.

*Measures of Surface.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Square**  **Inches.** | **Square Links/** | **Square**  **Feet.** | **Square Yards.** | **Square pole or perch.** | Square chain. | **Square rod.** | **Acre.** |
| **62·726** | **1** |  | **...** |  | **...** | **...** |  |
| **144** | **2-295** | **1** | **...** | **...** |  | **...** | **...** |
| **1296** | **20·661** | **9** | **1** |  | **...** | **...** | **...** |
| **39204** | **625** | **272∙25** | **30·25** | **1** | **...** | **...** | **...** |
| **627264** | **10000** | **4356** | **484** | **16** | **1** |  |  |
| **1568160** | **25000** | **10890** | **1210** | **40** | **2·5** | **1** | **...** |
| **6272640** | **100000** | **43560** | **4840** | **160** | **10** | **4** | **I** |

In the superficial measurement of stone, brick, or slate work, 36 square yards are termed a rood, and 100 square feet of flooring a square. There are 1728 cubic inches in the cubic foot, and 27 cubic feet in the cubic yard ; 40 cubic feet of rough, or 50 of hewn timber, make a load or ton. A cubic yard of earth is called a load.

*Imperial Liquid and Dry Measure, deduced from the Standard Gallon containing* 10 *lbs. avoirdupois of distilled water al the temperature of* 62° *Fahrenheit, and barometer* 30 *inches.*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pounds of**  **Water.** | **Cubic Inches.** | Gills. | **Pints.** | **Quarts.** | **Pottles.** | **Gallons.** | **Pecks.** | **Bushels.** | **Coombs.** | **Quarter.** |
| **1∙25** | **34∙659** | **4** | **1** |  |  |  | **...** |  | **...** | **...** |
| **2∙5** | **69∙318** | **8** | **2** | **1** | **...** |  | **...** | **...** | **...** | **...** |
| **5** | **138∙637** | **16** | **4** | **2** | **1** | **...** | **...** | **...** |  | **...** |
| **10** | **277∙274** | **32** | **8** | **4** | **2** | **1** |  |  |  | **...** |
| **20** | **554∙548** | **64** | **16** | **8** | **4** | **2** | **1** | **...** |  | **...** |
| **80** | **2218∙191** | **256** | **64** | **32** | **16** | **8** | **4** | **1** | **...** |  |
| **320** | **8872∙7631024** | | **256** | **128** | **64** | **32** | **16** | **4** | **1** | **...** |
| **640** | **17745∙526 2048** | | **512** | **256** | **128** | **64** | **32** | **8** | **2** | **1** |

This measure came first into operation 1st January 1826, but has only been compulsory as the sole legal measure of capacity since 1st January 1836. The peck, bushel, coomb, and quarter are dry measures only.

In beer measure, the barrel consists of 36 gallons = 4 firkins, and the hogshead contains 1½ barrel or 54 gallons. The anker, tierce, hogshead, puncheon, pipe, butt, and tun, used for wine and spirits, are so vague and variable in their contents, that they are to be considered rather as thc names of the casks than as expressing any fixed or definite measures. However, such vessels are usually gauged, and have their contents, whatever they may be, marked on them. But for a great variety of local and customary weights, measures, and packages of a less general nature, we beg to refer to the Second Report of the Parliamentary Commissioners on Weights and Measures, to Buchanan’s Treatise on the same sub­ject, and to Waterston’s Manual of Commerce.

In the old English wine measure, 32 gills = 8 pints = 4 quarts = 1 gallon = 83311 imperial gallon ; so that 6 old wine gallons were very nearly equal to 5 imperial.

In the old English ale measure, 8 pints = 4 quarts = 1 gallon = 1·01704 imperial gallon.

All the denominations of the old English or Winchester dry measure were the same as those of the imperial, but each of the former was less than the latter in the proportion of 32 to 33 nearly, or, more accurately, of ∙969447 to 1. Wherefore, each of the Winchester measures will be reduced to imperial by multiplying it by ·969447.