To reduce short weight to long weight. To the short weight add one-fourteenth, and the sum will be long wt.

To reduce long weight to short. From the long weight deduct one-fifteenth, and the remainder will be short weight.

$4\frac{1}{2}$ Stones, 1 barrel of Flour ; 20 Stones of Wheat, Peas, Rye, or Beans, 1 barrel ; 16 Stones, 1 barrel of Barley or Bere ; 14 Stones, 1 barrel of Oats ; 8 Stones of Oatmeal, 1 barrel of Oatmeal ; 12 Stones, 1 barrel of Malt.

The Pound Avoirdupois is, to the pound Troy, as 700 is to 576, or as 175 is to 144, or as 1 is to 822857

Hence to reduce Avoirdupois to Troy weight, multiply by 822857.—Or to reduce Troy to Avoirdupois, multiply by 1·215278, and the product is the answer.

LONG MEASURE.

12 lines, or 3 barley corns,=1 inch ; 3 inches= 1 palm; 4 inches=1 hand ; 9 inches=1 span ; 12 inches=1 foot; 18 inches=1 cubit ; $2\frac{1}{2}$ feet =1 military pace ; 5 feet=1 geographical pace ; 6 feet= 1 fathom ; 3 feet 1 yard; $5\frac{1}{2}$ yards=1 English or Stat. perch ; $6\frac{1}{4}$ yards=1 Scotch Cunningham perch ; 7 yards=1 Irish perch ; 40 perches=1 furlong ; 8 furlongs=1 mile ; 11 yds.=1 Eng. chain ; 14 yds.=1 Irish chain ; 1760 yds.=1 English mile ; 2000 yds.=1 Scotch mile ; 2240 yds.=1 Irish mile ; $2038\frac{2}{3}$ yards=1 geographical or sea mile ; 3 miles= 1 league : 60 sea, or geographical miles, $69\frac{1}{2}$ English miles and $54\frac{17}{2.6}$ Irish miles=1 degree on the equator; 60 degrees=circumference of the earth and all circles; 1 French league is about=$2\frac{1}{4}$ English miles; 1 German mile=4 do. ; 1 Dutch mile=$3\frac{1}{4}$ do. ; 1 Italian mile,=$1\frac{1}{2}$ do. ; 1 Spanish league=$3\frac{2}{3}$ do. ; 1 Russian verst=$\frac{1}{4}$ do. ; 11 Irish miles=14 do.