Module : Geometry

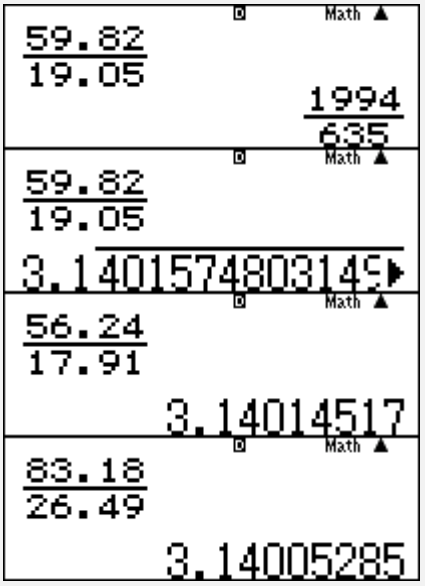
Part B – Estimating pi from real data

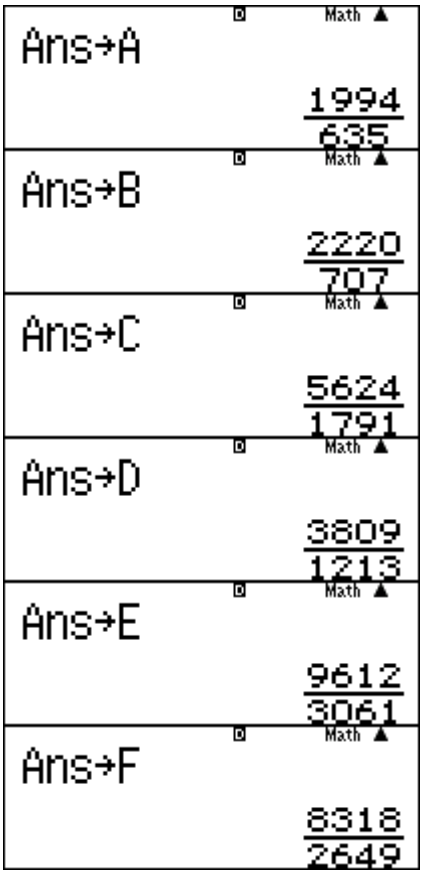
The number pi has been around as long as there have been circles. It is the ratio of the circumference of circle to the diameter of the circle or $\boldsymbol{\pi} = \frac{\boldsymbol{d}}{\boldsymbol{c}}$.

The dimensions of US coins according the United States Mint.

Penny: c =59.82 mm, d = 19.05 mm
Nickel: c = 66.6 mm, d = 21.21 mm
Dime: c =56.24 mm, d =17.91 mm
Quarte: c = 76.18 mm, d = 24.26 mm
Half Dollar: c = 96.12 mm, d = 30.61 mm
Dollar: c = 83.18 mm, d= 26.49 mm
Calculate the ratio of the commerce to the diameter.

[5] [9] [•] [8] [2] [▤] [1] [9] [•] [0] [5] [=] [S⇔D]



Store the values for each ratio in variables A, B, C, D, E and F 5 9 • 8 2 ▤ 1 9 • 0 5 = SHIFT RCL (STO) (−) (A) =	
Find the average of variables A-F and get an estimate of the value of pi. ▤ ALPHA (−) + ALPHA °,,, + ALPHA hyp + ALPHA sin + ALPHA cos + ALPHA tan ▼ 6 =