

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 $\pi=\frac{d}{c}$.

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.

59 • 82 = 19 • 0

5 **=** S+D

	П	Math ▲
59.82		matii 🛋
59.82 19.05		
19.00		1994
		635
	0	Math ▲
59.82 19.05		
19.05		
$9.1\overline{40}$	157/100	01 //CW
0.140	<u> 157480</u>	<u> </u>
56.24		
$\frac{56.24}{17.91}$		
	<u>3.140</u>	145171
00.40	0	Math ▲
$\frac{83.18}{26.49}$		
26.49		
	3,140	ngoogl
	<u>J.140</u>	UUZOU

Eureka Math: CASIO Technology Instructions





Ans⇒A Ans∍B Ans⇒C Store the values for each ratio in variables A, B, C, D, E and F 59.82.19.0 Ans⇒D $5 \equiv SHIFT RCL(STO) (-)(A) \equiv$ Ans∍E 9612 Ans∍F Find the average of variables A-F and get an estimate of the value of Math ▲ A+B+C+D+E+F pi. ALPHA (-) + ALPHA (->>>) + ALPHA (hyp) 3.140113743 + ALPHA sin + ALPHA cos + ALPHA tan **▼**6 =