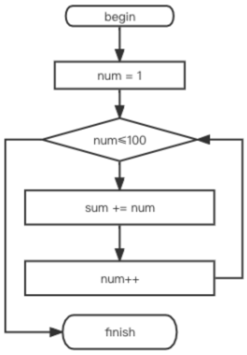
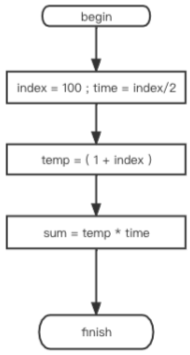
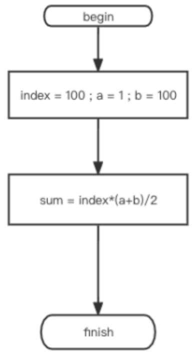


Method 1



Method 2



Method 3

created by
Hanlin Cai
832002117
2022/03/10

EE208.

3.Sol

(i) Due to $V = \frac{4}{3}\pi r^3$ ①

the unit is $(cm)^3$

(ii) $V = \frac{4}{3} \times 3.1416 \times (4)^3\ cm^3$

$= 268.08\ cm^3$

(iii) ① the input is the data of the radius (cm) of the ~~radius~~ sphere

② the output is the data of the volume of the sphere

③ algorithm : ~~float x~~

//set the input ; float radius ;

//calculate the data; cout << "Volume =" << 3.1416 * pow(radius,3)*4/3;

PS: in this algorithm, we must include the api <math.h>

sol

7(i) $r^3 = \frac{d \times P}{\pi \times S}$ ②

So $r^3 = \frac{7 \times 300}{\pi \times 10000} (in^3)$ $r \approx$ 0.406 inch

(ii) ① the input is the data of the length of the crank arm & the weight placed on the pedal and the stress.

② the output is the radius of the cylindrical rod ~~in~~.

③ algorims :

//set the input ; float d , P , S ;

//calculate the output cout << "radius =" << pow((d*P/π)/S, 1.0/3.0);

Thank you!