# **Problems #16 to #20**

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# **Problem 16**

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Description: Write A program to Get A Rectangle Area By Diagonal & side

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#include <iostream>

#include <string>

using namespace std;

void ReadNumbers(int& A, int& D){

cout<<"Enter Rectangle Side A: ";

cin>> A;

cout<<"Enter Rectangle Diagonal: ";

cin>> D;

}

float RectangleAreaBySideAndDiagonal(float A, float D){

float Area = A \* sqrt(pow(D,2) - pow(A,2));

return Area;

}

void PrintResult(float Area){

cout<<"\nRectangle Area = "<< Area<<endl;

}

int main()

{

float A, D;

ReadNumbers(A,D);

PrintResult(RectangleAreaBySideAndDiagonal(A,D));

return 0;

}

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# **Problem 17**

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Description: Write a program to get the Triangle Area:

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#include <iostream>

using namespace std;

void ReadNumbers (float& A, float& H){

cout<<"\nEnter A: ";

cin>> A;

cout<<"\nEnter H: ";

cin>> H;

}

float TriangleArea(float A, float H){

float Area = (A / 2) \* H;

return Area;

}

void PrintResult(float Area){

cout<<"The Area Is: "<<Area<<endl;

}

int main(){

float A, H;

ReadNumbers(A,H);

PrintResult(TriangleArea(A,H));

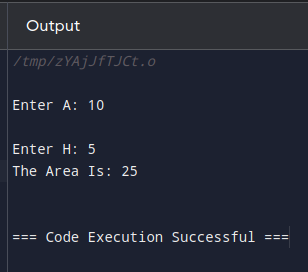
return 0;

}

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The Output:

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# **Problem 18**

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Description:Write a program to get a circle area

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#include <iostream>

#include <cmath>

#include <string>

using namespace std;

float ReadRadious(){

float R = 0;

cout<<"\nEnter Radius: ";

cin>> R;

return R;

}

float CircleArea(float R){

const float PI=3.141592653589793238;

float Area = pow(R,2) \* PI;

return Area;

}

void PrintResult(float Area){

cout<<"The Circle Area Is: "<<Area<<endl;

}

int main(){

PrintResult(CircleArea(ReadRadious()));

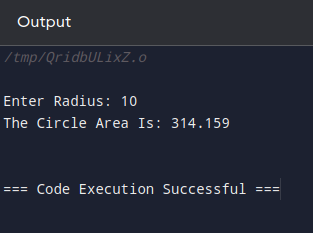
return 0;

}

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The output:

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# **Problem 19**

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Description: Write A program to get Circle Area By Diameter

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#include <iostream>

#include <cmath>

#include <string>

using namespace std;

float ReadDiameter(){

float D = 0;

cout<<"\nEnter Diameter: ";

cin>> D;

return D;

}

float CircleAreaByDiamter(float D){

const float PI=3.141592653589793238;

float Area = (pow(D,2) \* PI) / 4;

return Area;

}

void PrintResult(float Area){

cout<<"The Circle Area Is: "<<Area<<endl;

}

int main(){

PrintResult(CircleAreaByDiamter(ReadDiameter()));

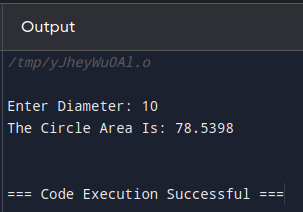
return 0;

}

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# **Problem 20**

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#include <iostream>

#include <cmath>

#include <string>

using namespace std;

float ReadSquareSide(){

float A = 0;

cout<<"\nEnter Square Side A : ";

cin>> A;

return A;

}

float CircleAreaInscribeedInSquare(float A){

const float PI=3.141592653589793238;

float Area = (PI \* pow(A,2)) / 4;

return Area;

}

void PrintResult(float Area){

cout<<"The Circle Area Is: "<<Area<<endl;

}

int main(){

PrintResult(CircleAreaInscribeedInSquare(ReadSquareSide()));

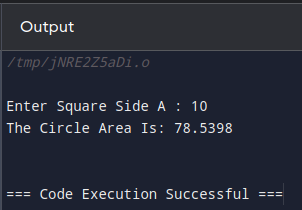
return 0;

}

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The Output:

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