



Programiz

C Online Compiler

Programiz PRO

main.c

Output



```
1 #include <stdio.h>
2
3 int main() {
4     float base, height, area;
5     printf("Enter the base of the
6         triangle: ");
7     scanf("%f", &base);
8     printf("Enter the height of the
9         triangle: ");
10    scanf("%f", &height);
11    area = 0.5 * base * height;
12    printf("The area of the triangle is
13        : %.2f\n", area);
14 }
15
```

Run



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/tmp/ww43STvSaP.o

Enter the base of the triangle: 4.5

Enter the height of the triangle: 5

The area of the triangle is: 11.25

==== Code Execution Successful ===|



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```
1 #include <stdio.h>
2
3 int main() {
4     float num1, num2, num3, sum,
5         average;
6     printf("Enter three numbers: ");
7     scanf("%f %f %f", &num1, &num2,
8           &num3);
9     sum = num1 + num2 + num3;
10    average = sum / 3;
11    printf("Sum: %.2f\n", sum);
12    printf("Average: %.2f\n", average);
13 }
14
```

Run



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/tmp/Yf3vyF4evK.o

Enter three numbers: 2 3 4

Sum: 9.00

Average: 3.00

==== Code Execution Successful ===|



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```
1 #include <stdio.h>
2 #define PI 3.14159
3
4 int main() {
5     float radius, area;
6     printf("Enter the radius of the
7         circle: ");
8     scanf("%f", &radius);
9     area = PI * radius * radius;
10    printf("The area of the circle is:
11        %.2f\n", area);
12    return 0;
13 }
```

Run



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/tmp/a8hoVRvwIW.o

Enter the radius of the circle: 5

The area of the circle is: 78.54

==== Code Execution Successful ===|



main.c

Output



```
1 #include <stdio.h>
2
3 int main() {
4     float force, area, original_length,
5         deformed_length;
6     float stress, strain;
7     printf("Enter the force applied (in
8         Newtons): ");
9     scanf("%f", &force);
10    printf("Enter the cross-sectional
11        area (in square meters): ");
12    scanf("%f", &area);
13    stress = force / area;
14    printf("Enter the original length
15        (in meters): ");
16    scanf("%f", &original_length);
17    printf("Enter the deformed length
18        (in meters): ");
19    scanf("%f", &deformed_length);
20    strain = (deformed_length -
21        original_length) /
22        original_length;
```

Run



main.c

Output



```
/tmp/aFTLC3F4Pj.o
```

```
Enter the force applied (in Newtons): 3.7
```

```
Enter the cross-sectional area (in square  
meters): 5
```

```
Enter the original length (in meters): 8
```

```
Enter the deformed length (in meters): 6
```

```
Stress: 0.74 Pa (Pascals)
```

```
Strain: -0.2500 (dimensionless)
```

```
==== Code Execution Successful ===|
```



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Output



```
1 #include <stdio.h>
2
3 int main() {
4     float mass, radius,
5         angular_velocity,
6         centrifugal_force;
7     printf("Enter the mass (in kg): ");
8     scanf("%f", &mass);
9     printf("Enter the radius (in meters
10        ): ");
11    scanf("%f", &radius);
12    printf("Enter the angular velocity
13        (in radians per second): ");
14    scanf("%f", &angular_velocity);
15    centrifugal_force = mass * radius *
16        angular_velocity *
        angular_velocity;
17    printf("The centrifugal force is: %
18        .2f N (Newtons)\n",
19        centrifugal_force);
20
21    return 0;
22 }
```

Run



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main.c

Output



```
/tmp/FMMjdHpAOV.o
```

```
Enter the mass (in kg): 4
```

```
Enter the radius (in meters): 6
```

```
Enter the angular velocity (in radians per  
second): 7
```

```
The centrifugal force is: 1176.00 N (Newtons)
```

```
==== Code Execution Successful ===|
```



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main.c

Output



```
1 #include <stdio.h>
2
3 int main() {
4     float celsius, fahrenheit;
5     printf("Enter temperature in
6             Celsius: ");
7     scanf("%f", &celsius);
8     fahrenheit = (celsius * 9/5) + 32;|
9
10    printf("Temperature in Fahrenheit:
11        %.2f\n", fahrenheit);
12}
```

Run



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Programiz PRO

main.c

Output



/tmp/6XtQHR59W0.o

Enter temperature in Celsius: 4

Temperature in Fahrenheit: 39.20

==== Code Execution Successful ===|



main.c

Output



```
1 #include <stdio.h>
2
3 int main() {
4     float heat_input, work_output,
5         efficiency;
6
7     printf("Enter the heat input (in
8         Joules): ");
9     scanf("%f", &heat_input);
10    printf("Enter the work output (in
11        Joules): ");
12    scanf("%f", &work_output);
13
14    if (heat_input != 0) {
15        efficiency = (work_output /
16                        heat_input) * 100;
17        printf("The efficiency of the
18            heat engine is: %.2f%%\n",
19            efficiency);
20    } else {
21        printf("Heat input cannot be
22            zero.\n");
23    }
24    return 0;
25 }
```

Run



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main.c

Output



/tmp/LJKjMNuS0C.o

Enter the heat input (in Joules): 6

Enter the work output (in Joules): 7

The efficiency of the heat engine is: 116.67%

==== Code Execution Successful ===|



main.c

Output



```
1 #include <stdio.h>
2
3 int main() {
4     float mass, height, velocity,
5         potential_energy,
6         kinetic_energy,
7         mechanical_energy;
8
9     printf("Enter the mass (in kg): ");
10    scanf("%f", &mass);
11    printf("Enter the height (in meters
12        ): ");
13    scanf("%f", &height);
14    printf("Enter the velocity (in
15        meters per second): ");
16    scanf("%f", &velocity);
17    potential_energy = mass * 9.81 *
18        height;
19    kinetic_energy = 0.5 * mass *
20        velocity * velocity;
21    mechanical_energy =
22        potential_energy +
23        kinetic_energy;
24
25    printf("Potential Energy: %.2f
26            Joules\n", potential_energy);
27    printf("Kinetic Energy: %.2f
28            Joules\n", kinetic_energy);
29    printf("Total Mechanical Energy: %
30            .2f Joules\n",
31            mechanical_energy);
32
33    return 0;
34 }
```

Run



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/tmp/RqKyyDFSe5.o

Enter the mass (in kg): 5

Enter the height (in meters): 6

Enter the velocity (in meters per second): 8

Potential Energy: 294.30 Joules

Kinetic Energy: 160.00 Joules

Total Mechanical Energy: 454.30 Joules

==== Code Execution Successful ===|



```
1 #include <stdio.h>
2
3 int main() {
4     float heat_input, work_output,
5         efficiency;
6
7     printf("Enter the heat input (in
8         Joules): ");
9     scanf("%f", &heat_input);
10    printf("Enter the work output (in
11        Joules): ");
12    scanf("%f", &work_output);
13
14
15    efficiency = (work_output /
16                    heat_input) * 100;
17
18    return 0;
19}
```



Enter the heat input (in Joules): 2

Enter the work output (in Joules): 3

The efficiency of the thermal system is: 150

.00%