

# Class 2 - Find the Torsional Angle

You are given four points  $A, B, C$  and  $D$  in a 3-dimensional Cartesian coordinate system. You are required to print the angle between the plane made by the points  $A, B, C$  and  $B, C, D$  in degrees(**not radians**). Let the angle be  $PHI$ .

$$\text{Cos}(PHI) = (X.Y)/|X||Y| \text{ where } X = AB \times BC \text{ and } Y = BC \times CD.$$

Here,  $X.Y$  means the dot product of  $X$  and  $Y$ , and  $AB \times BC$  means the cross product of vectors  $AB$  and  $BC$ . Also,  $AB = B - A$ .

## Input Format

One line of input containing the space separated floating number values of the  $X, Y$  and  $Z$  coordinates of a point.

## Output Format

Output the angle correct up to two decimal places.

## Sample Input

```
0 4 5
1 7 6
0 5 9
1 7 2
```

## Sample Output

```
8.19
```