



## 12.1.11 Editors - Geometry Nodes Editor - Header - Add Menu - Geometry - Sample

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### Detailed table of content

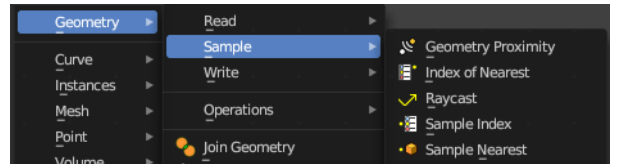
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## Add menu - Geometry - Sample

Here you find nodes to modify the geometry.



## Geometry Proximity

This node finds the closest position on the target for each point in the input geometry.

### Inputs

#### Target

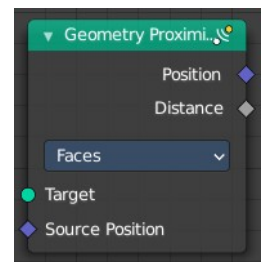
The target object.

#### Result

Name of the attribute where the output is stored. If the attribute does not exist yet, it is created.

#### Position

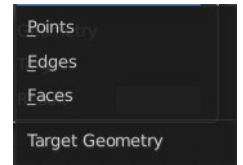
The position where the computed location is stored.



## Properties

### ***Target Geometry***

The element of the target geometry to calculate the distance from.



## Outputs

### ***Position***

Closest location on the surface of the target mesh, or the closest point in the target point cloud in Points mode.

### ***Distance***

Distance from the source position to the closest location in the target.

## Index of Nearest

Retrieve values from specific geometry elements.

## Inputs

### ***Position***

The position of the nearest element.

### ***Group ID***

The group ID of the nearest element.



## Outputs

### ***Index***

The Index of the nearest element.

### ***Has Neighbor***

Has this element a neighbor.

## Raycast

This node sends a raycast and retrieves data from the hit target.

### Inputs

#### **Target Geometry**

This is actually the source object that sends the ray.

#### **Attribute**

Attribute input.

#### **Source Position**

Source position input.

#### **Ray Direction**

A vector 3 for the ray direction.

#### **Ray Length**

The length of the ray.

### Properties

#### **Data Type**

What data to calculate on hit.

#### **Mapping**

Mapping from the target geometry to hit points. Interpolated or nearest.

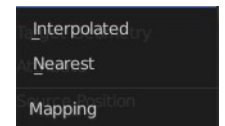
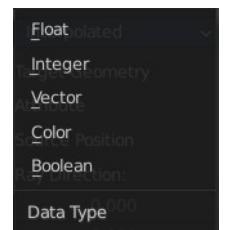
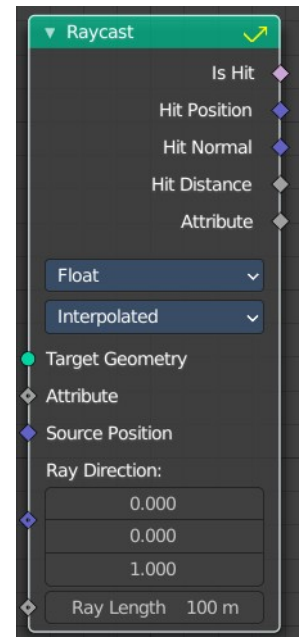
### Output

#### **Is Hit**

Has the raycast hit something?

#### **Hit Position**

The hit position if any.



### ***Hit Normal***

The normal of the hit point.

### ***Hit Distance***

The distance of the hit point.

### ***Attribute***

The attribute of the hit object.

## **Sample Index**

Retrieve values from specific geometry elements.

### **Inputs**

#### ***Geometry***

The source object to take the data from.

#### ***Value***

The value to retrieve.

#### ***Index***

The index position of the value.

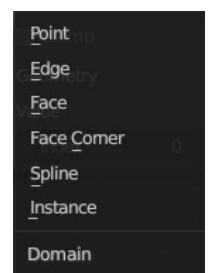
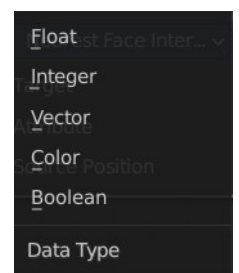
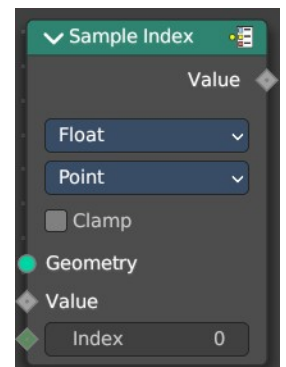
### **Properties**

#### ***Data Type***

The type for the source and result data.

#### ***Domain***

What kind of data to process.



## ***Clamp***

Clamp the indices to the size of the attribute domain.

## **Output**

### ***Value***

The output value.

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## **Sample Nearest**

Retrieves the element of a geometry closest to a position.

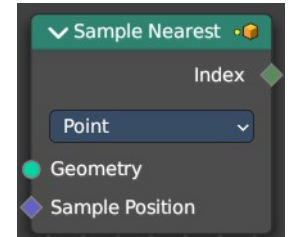
## **Inputs**

### ***Geometry***

The source object to take the data from.

### ***Sample Position***

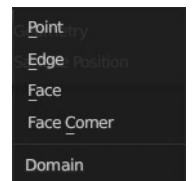
The position of the source object.



## **Properties**

### ***Domain***

What data to process.



## **Output**

### ***Index***

The index output.