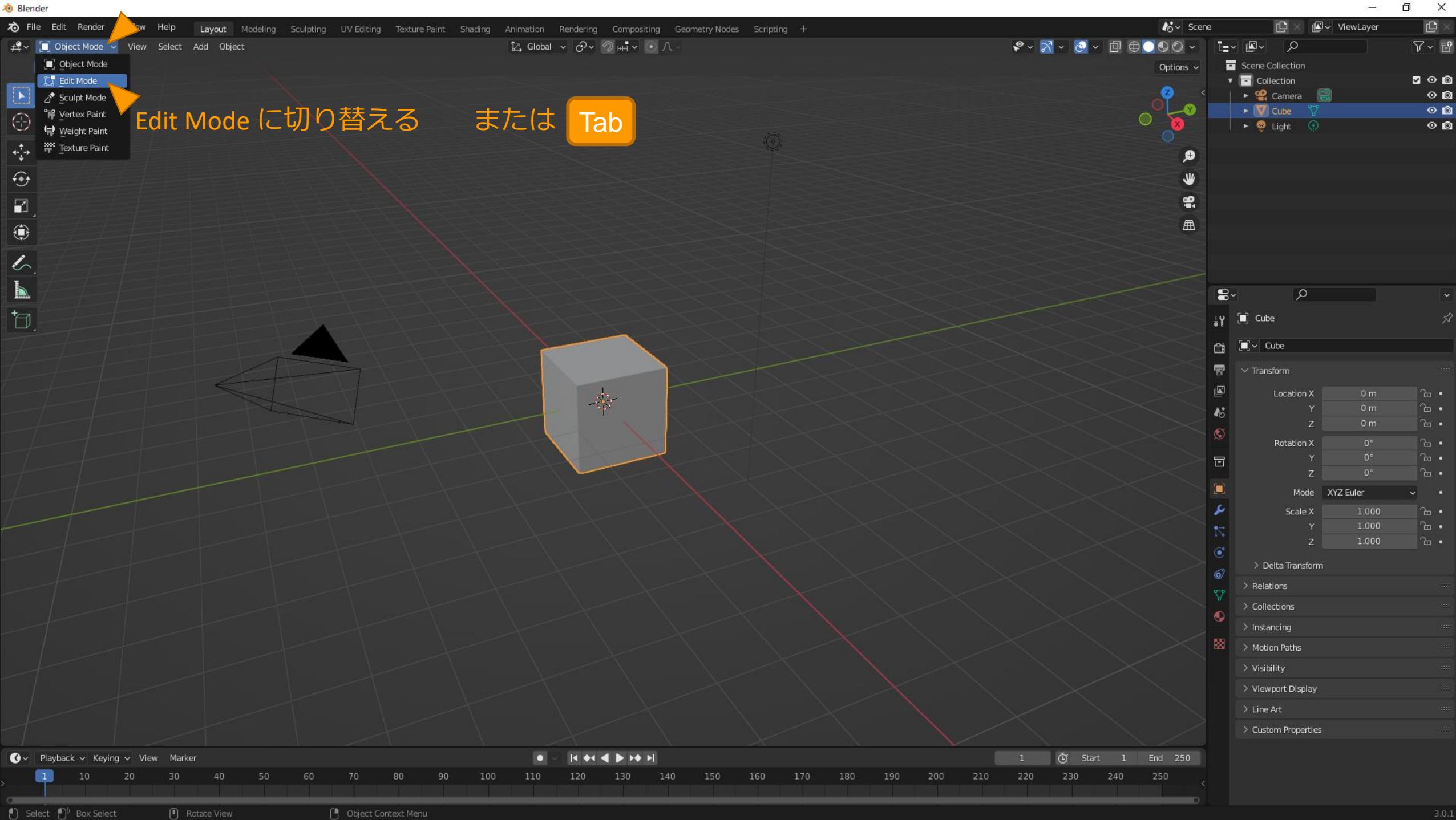
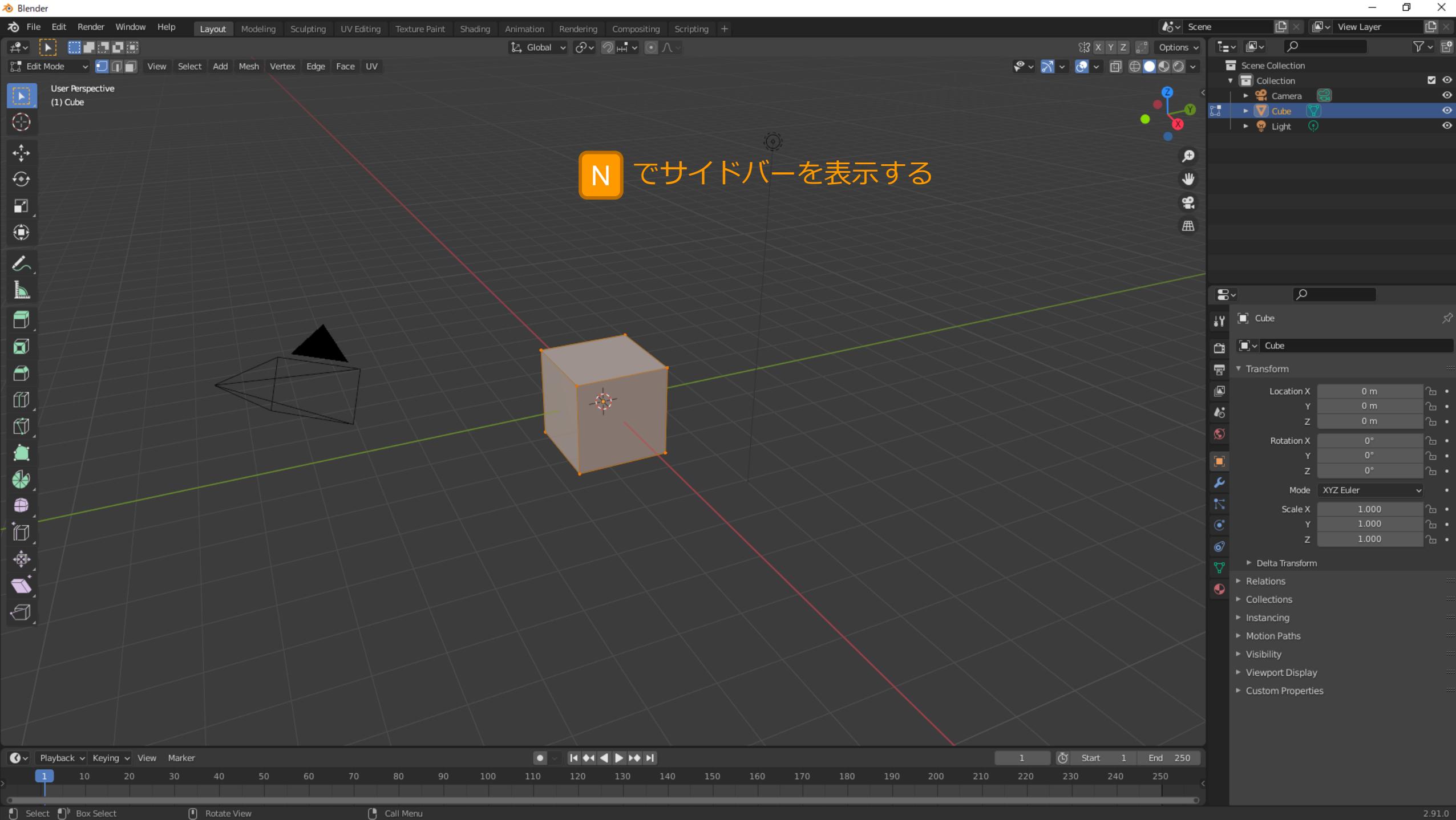
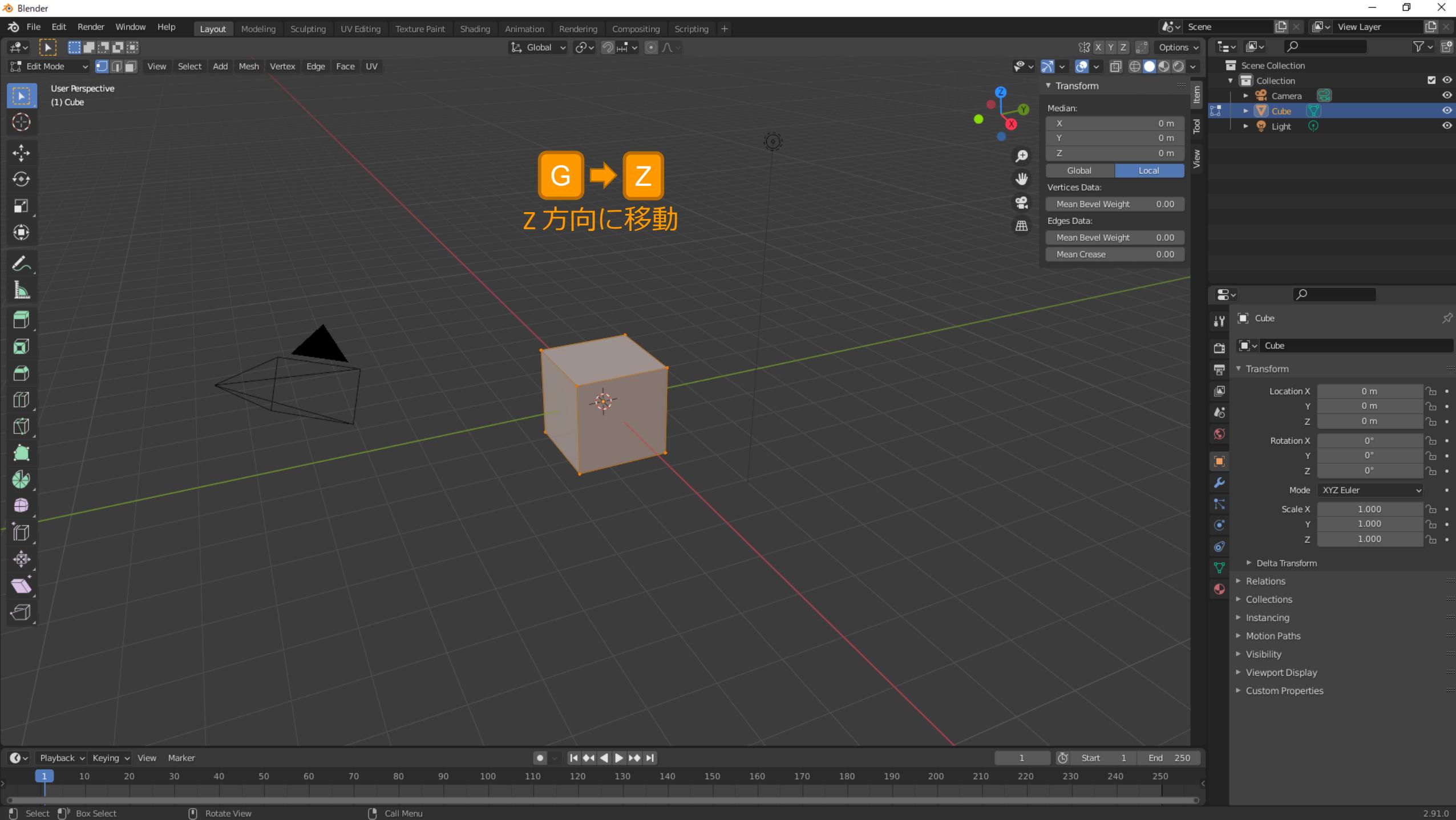
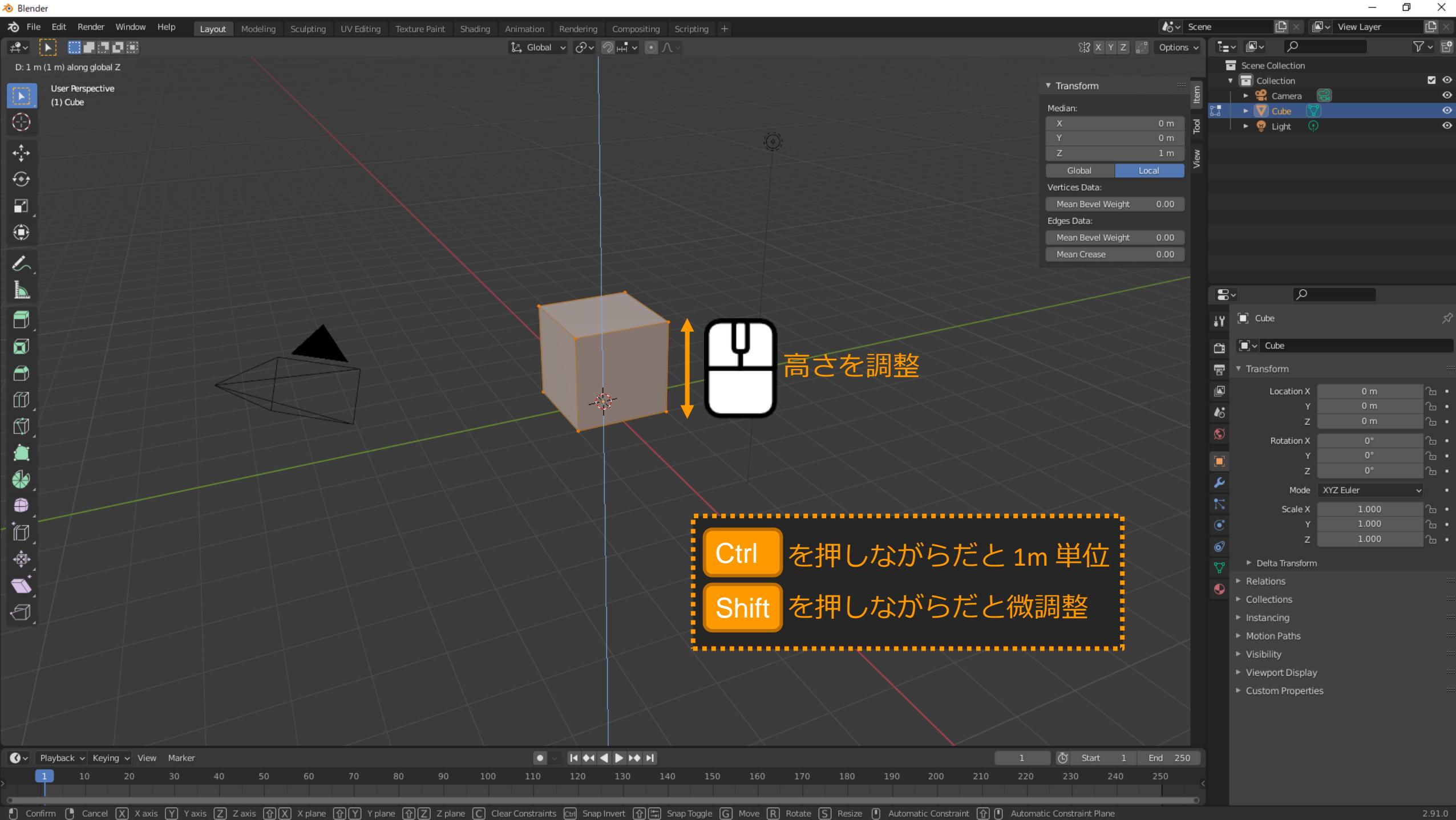


箱人間を作つて歩かせる









Blender 2.91.0

User Perspective (1 Cube)

D: 1 m (1 m) along global Z

Transform

Median:

X	0 m
Y	0 m
Z	1 m

Global Local

Vertices Data:

Mean Bevel Weight 0.00

Edges Data:

Mean Bevel Weight 0.00

Mean Crease 0.00

Enter または 確定

Scene Collection

- Collection
- Camera
- Cube
- Light

View Layer

Transform

Location X Y Z 0 m 0 m 0 m

Rotation X Y Z 0° 0° 0°

Mode XYZ Euler

Scale X Y Z 1.000 1.000 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

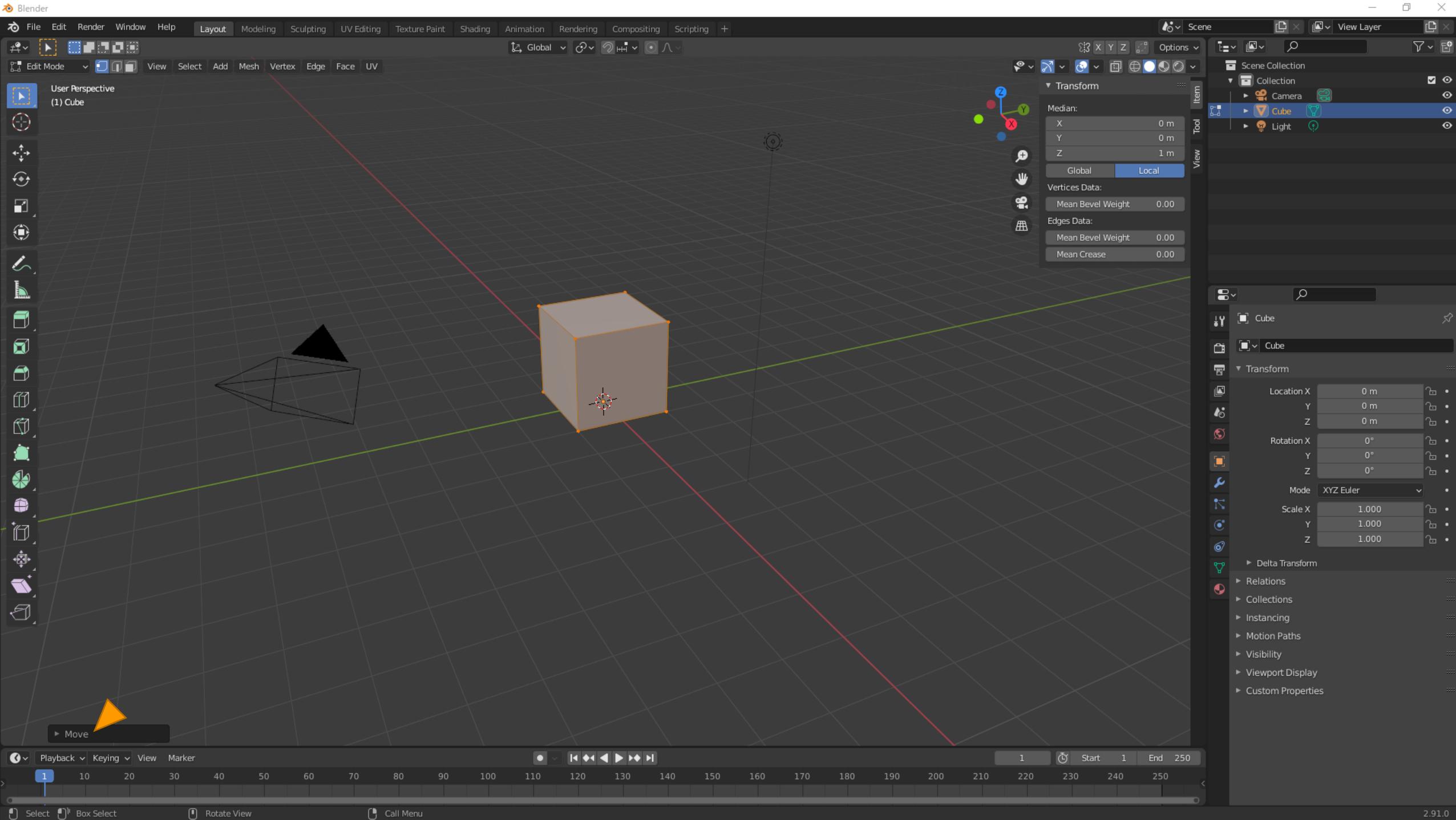
Custom Properties

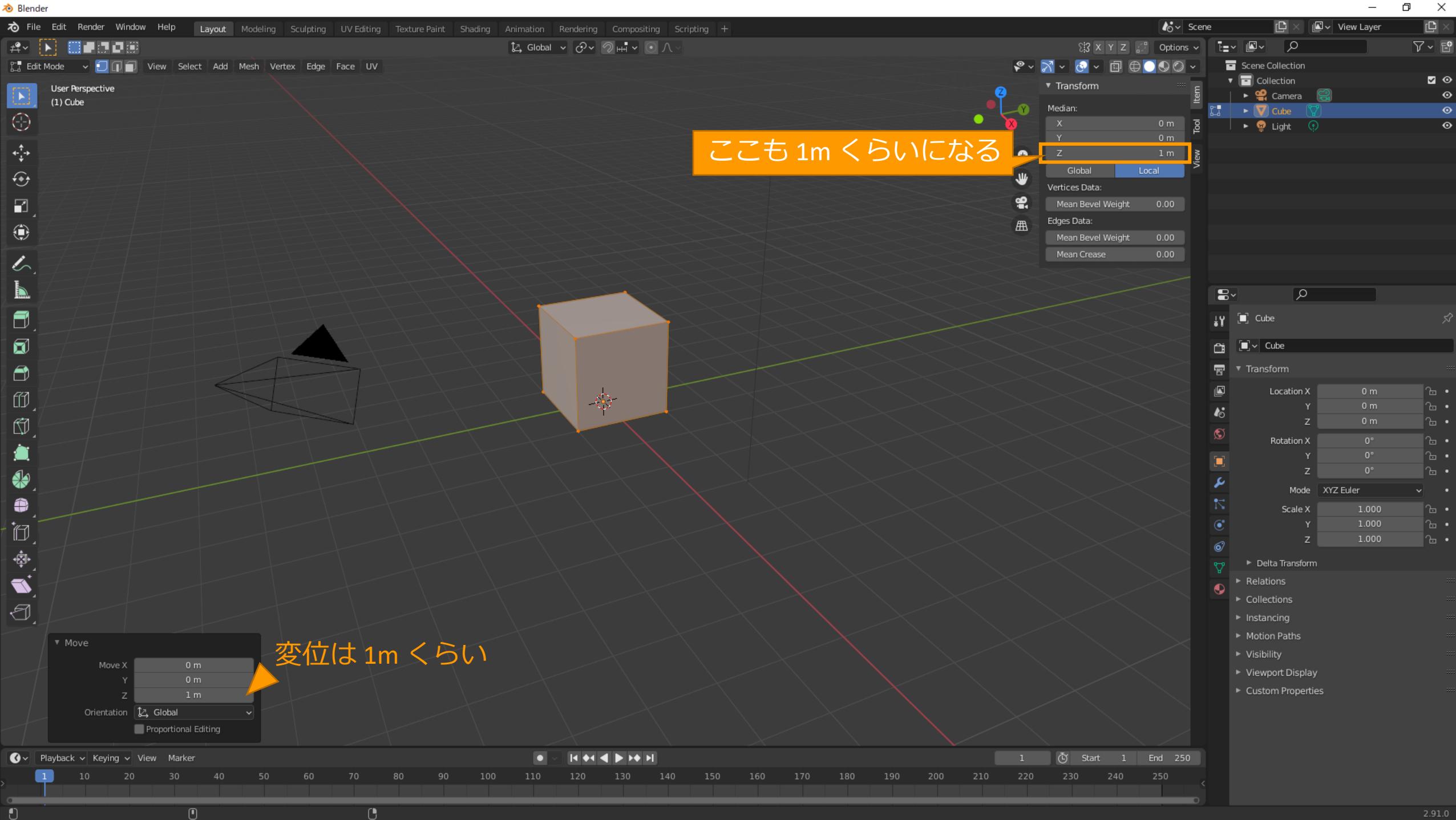
Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start End 1 1 250

Confirm Cancel Xaxis Yaxis Zaxis X plane Y plane Z plane Clear Constraints Snap Invert Snap Toggle Move Rotate Resize Automatic Constraint Automatic Constraint Plane





Blender

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Edit Mode View Select Add Mesh Vertex Edge Face UV

User Perspective (1) Cube

S → Enter または
スケールを選んで確定

Move

- Move X: 0 m
- Move Y: 0 m
- Move Z: 1 m

Orientation: Global

Proportional Editing

Global Local

Median:

- X: 0 m
- Y: 0 m
- Z: 1 m

Vertices Data:
Mean Bevel Weight: 0.00

Edges Data:
Mean Bevel Weight: 0.00

Mean Crease: 0.00

Transform

Location X: 0 m
Y: 0 m
Z: 0 m

Rotation X: 0°
Y: 0°
Z: 0°

Mode: XYZ Euler

Scale X: 1.000
Y: 1.000
Z: 1.000

Scene Collection

- Collection
- Camera
- Cube
- Light

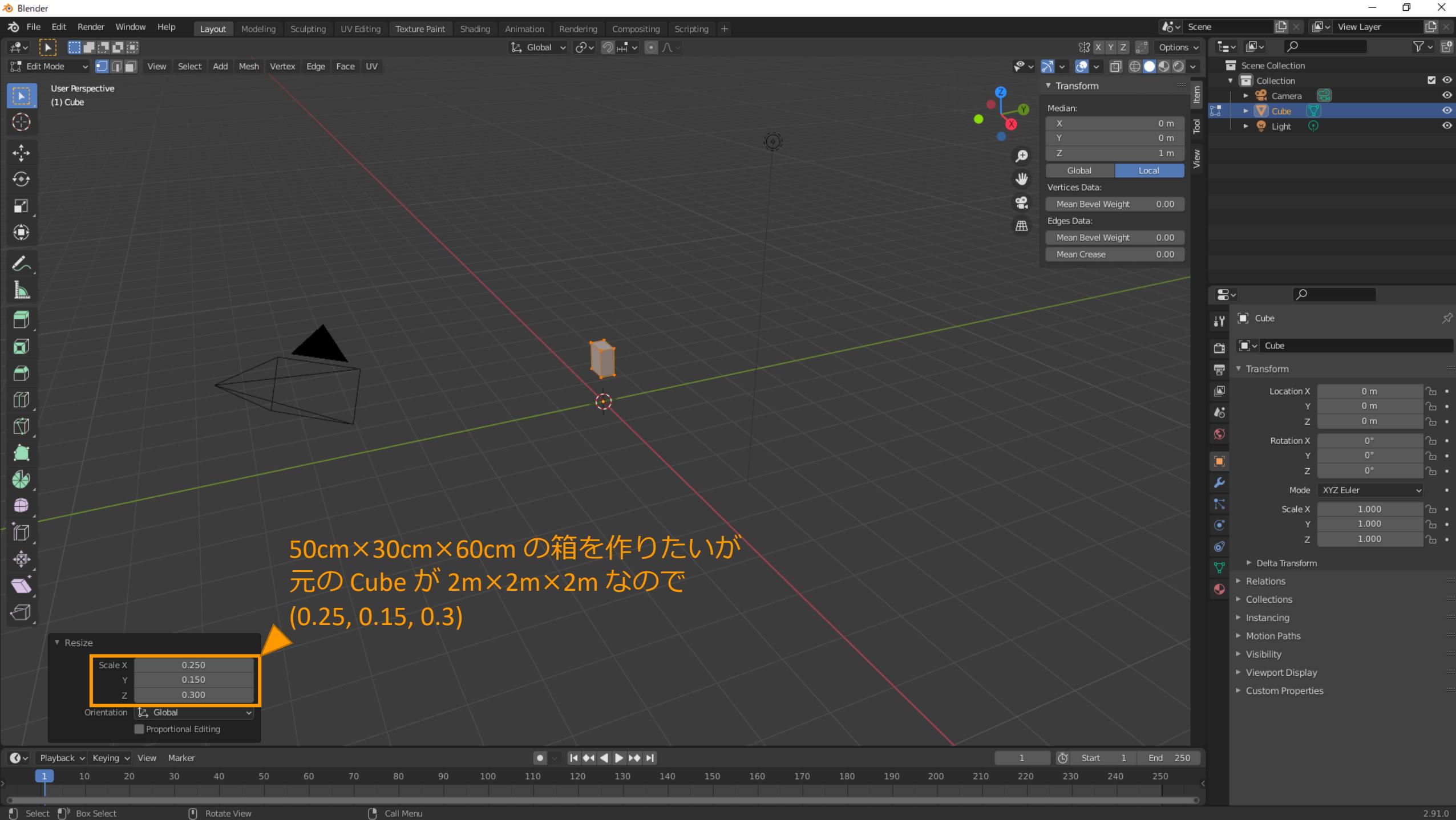
View Layer

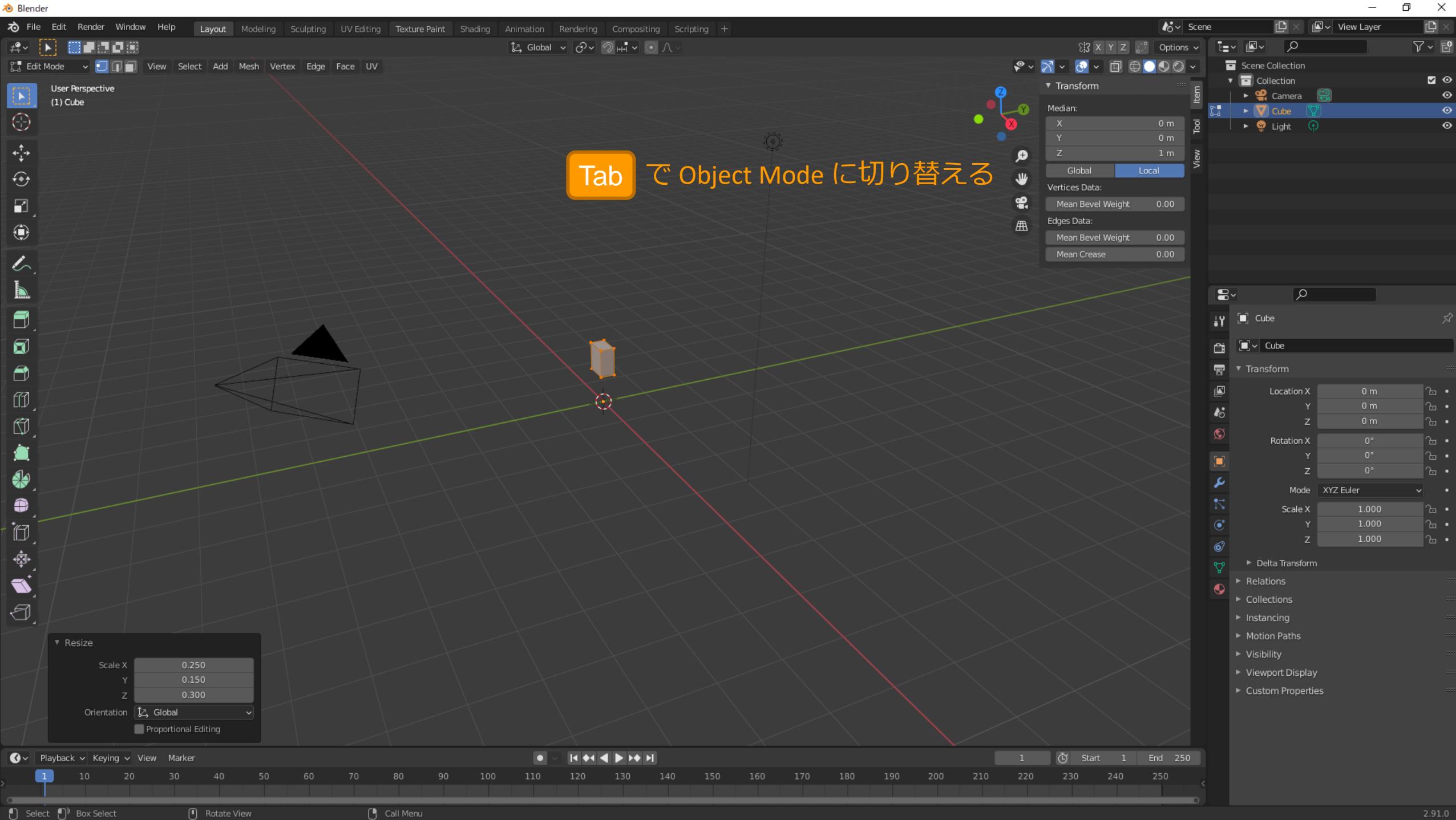
Playback Keying View Marker

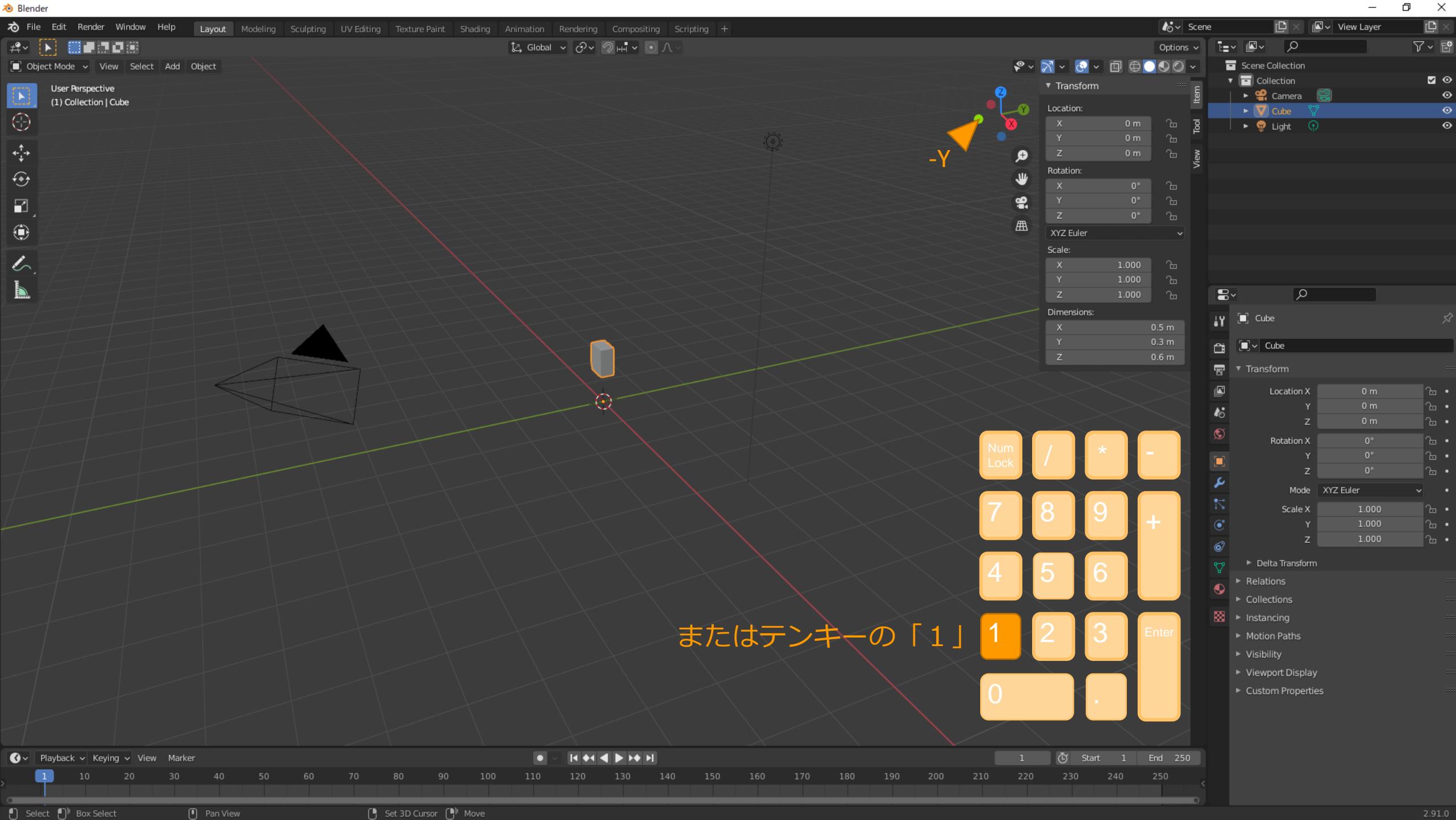
Start End 250

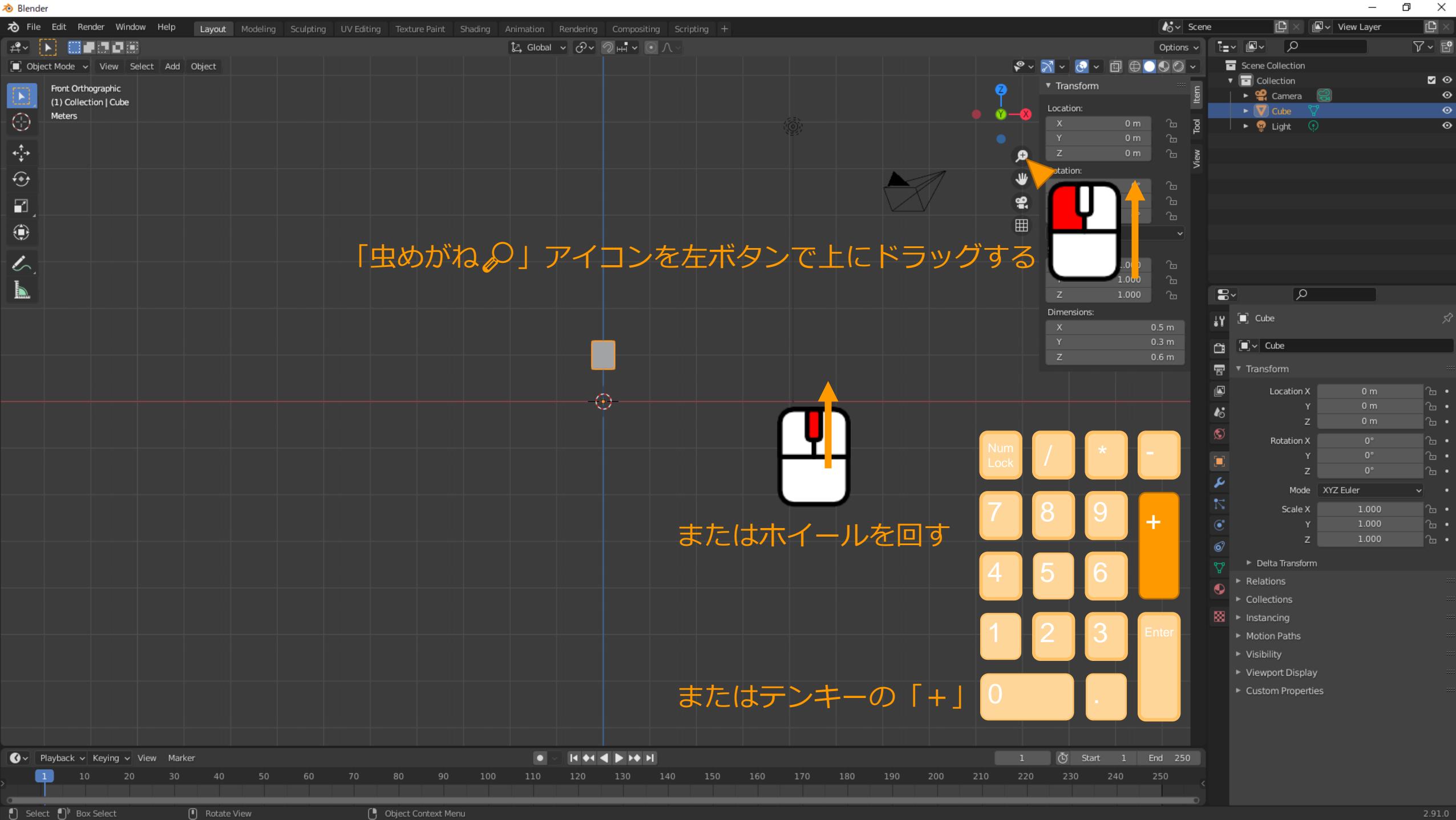
2.91.0

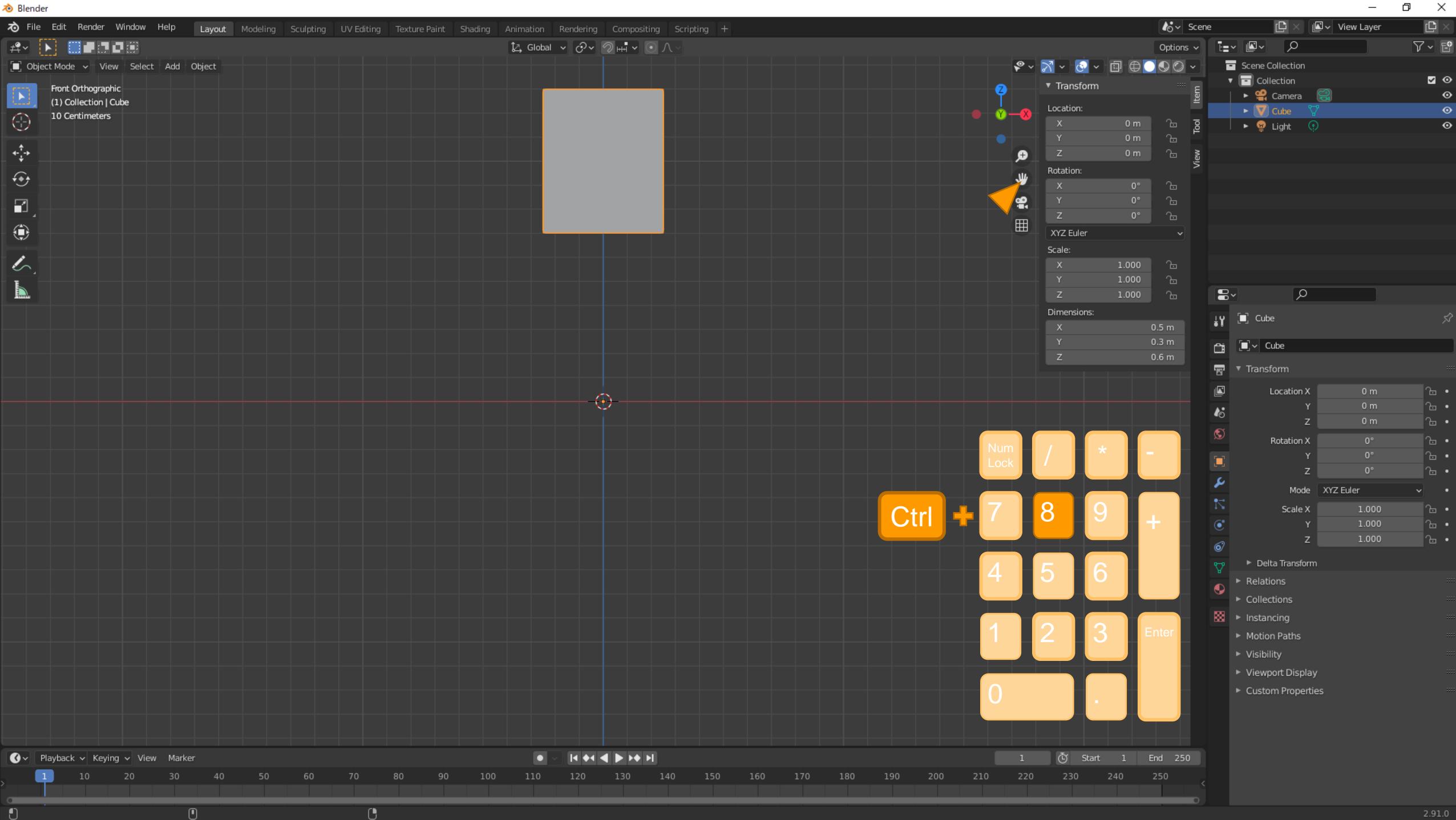
The image shows a screenshot of the Blender 3D Editor in Edit Mode. A large orange button in the center of the screen contains the text "S → Enter" with a red arrow pointing from "S" to "Enter", followed by the Japanese text "または" (Or) and "スケールを選んで確定" (Select a scale and confirm). To the right of this button is a transform tool icon. In the 3D Viewport, there is a cube and a smaller pyramid-like shape. The Outliner panel on the right shows a scene collection with objects like Camera, Cube, and Light. The Properties panel on the right shows transform settings for the selected cube, including location, rotation, and scale. The bottom bar includes playback controls and a timeline.

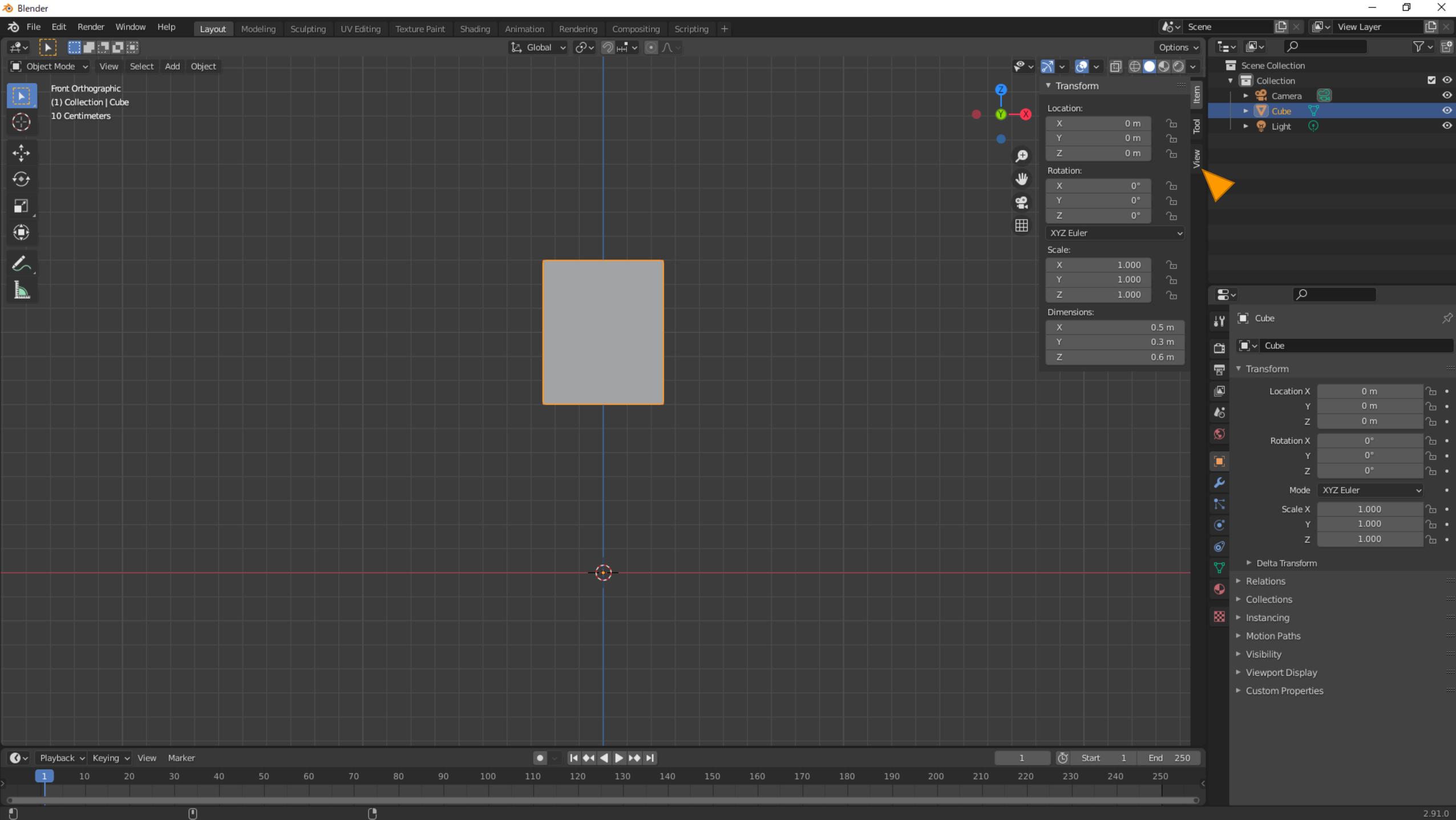


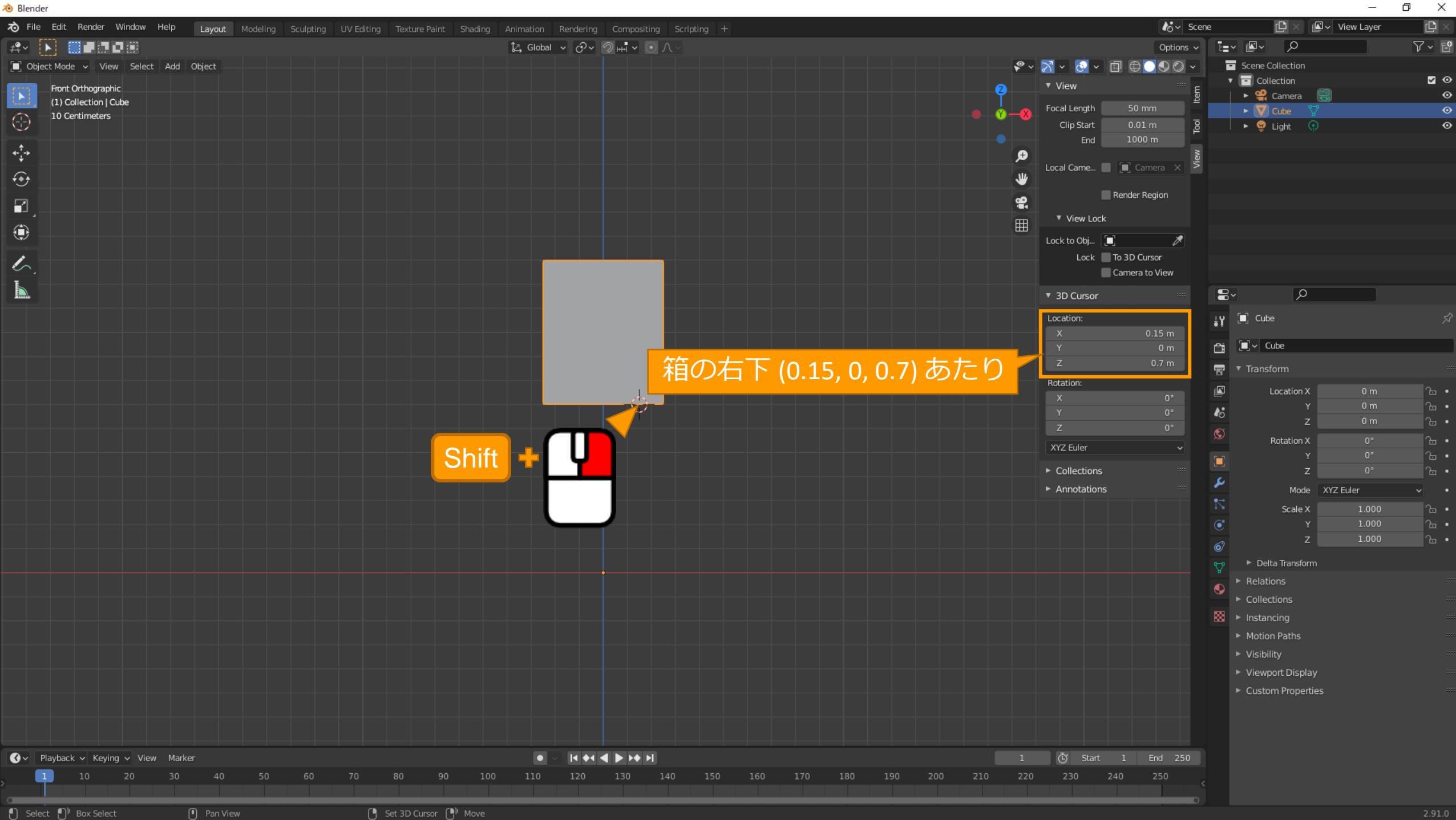


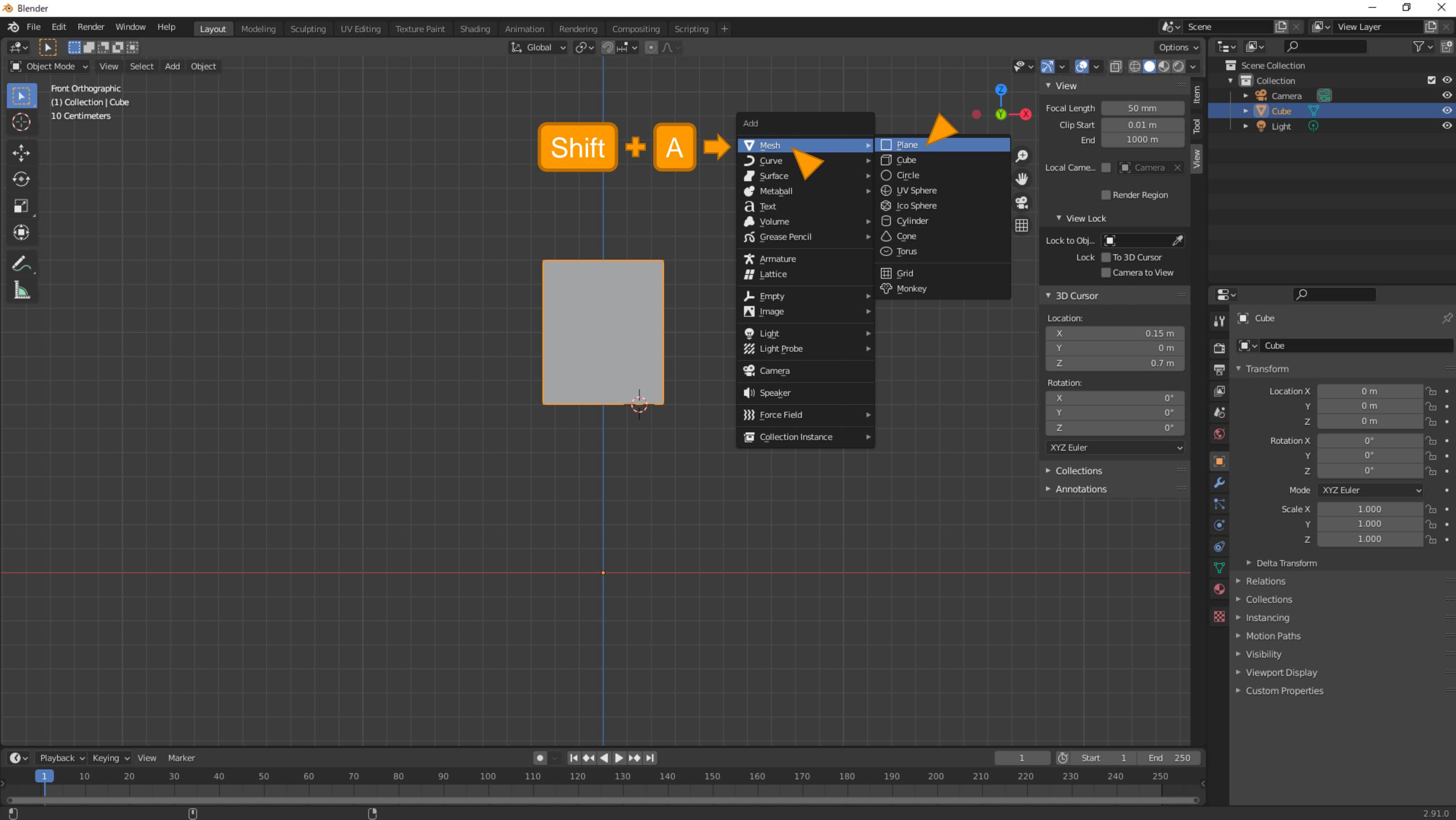


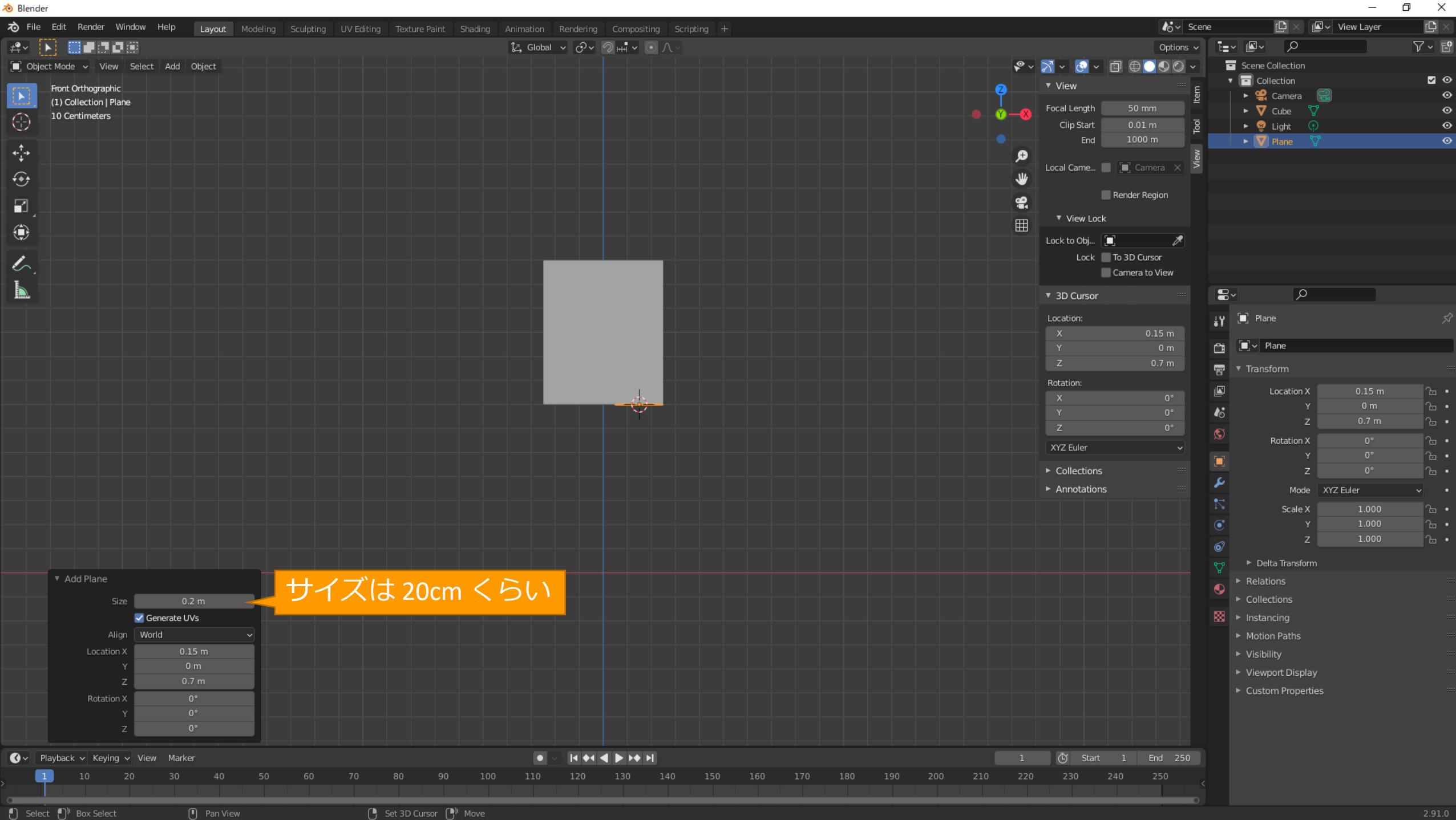


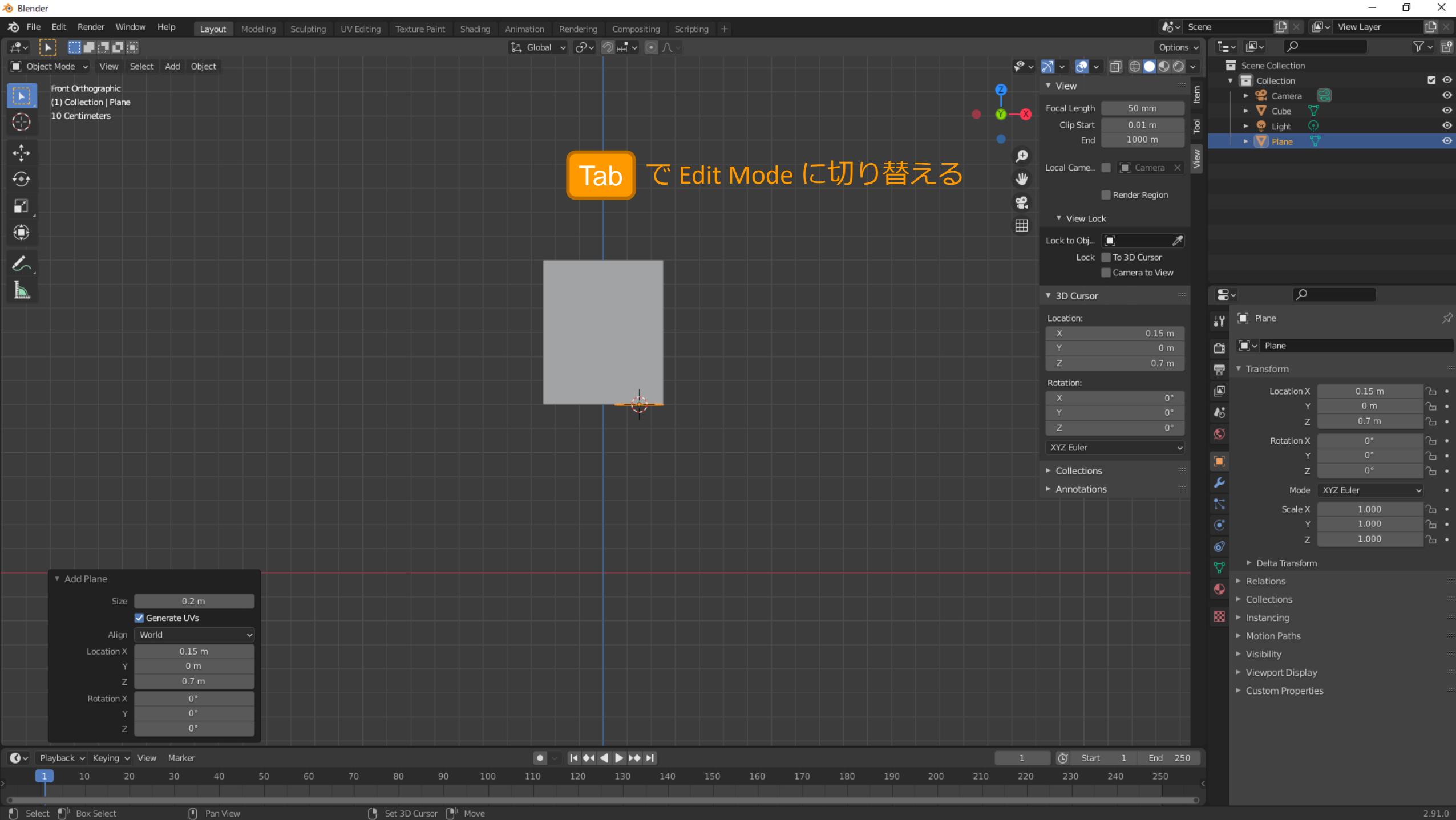


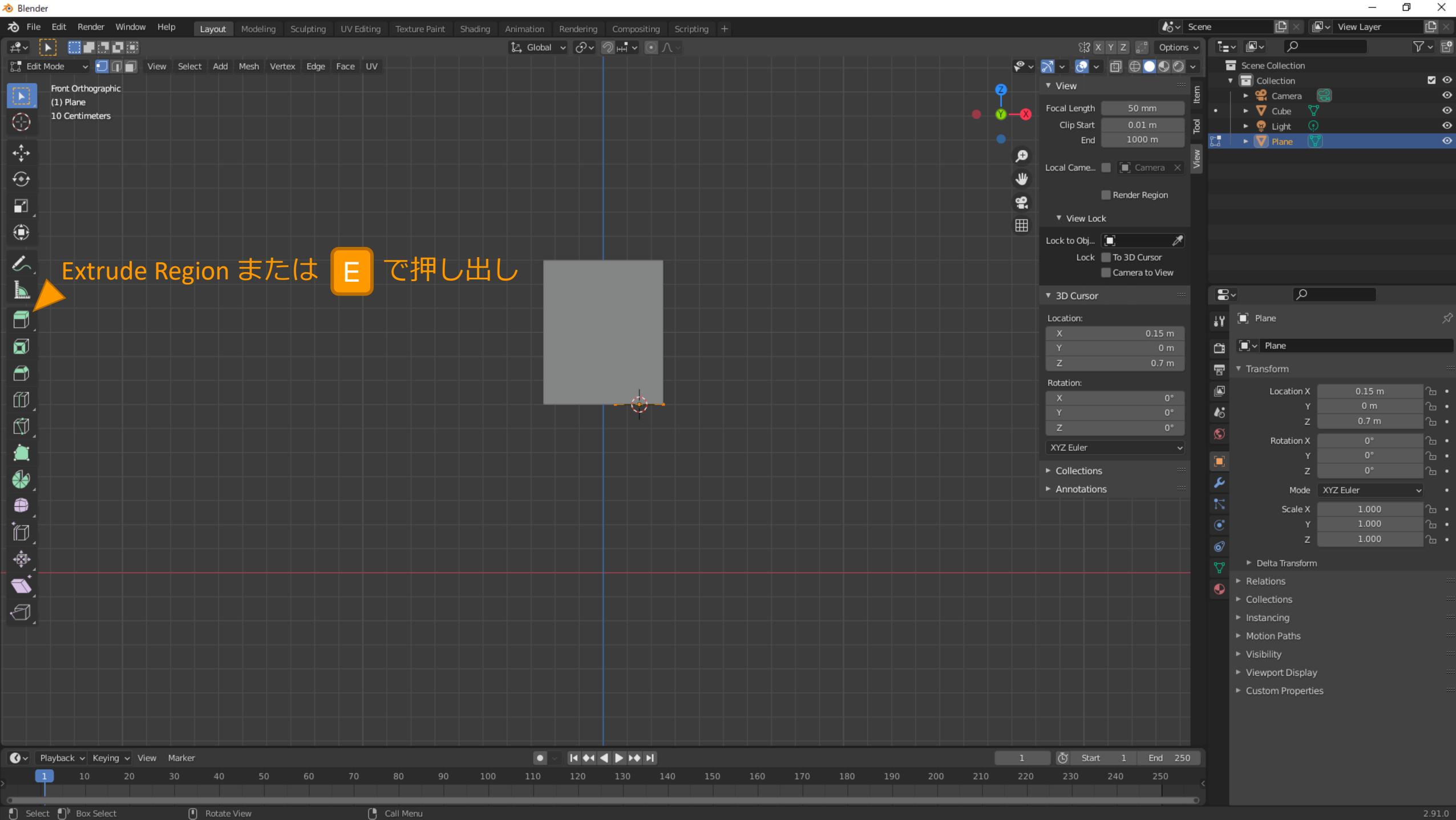












Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

D: -0.1677 m (0.1677 m) normal

Front Orthographic (1) Plane 10 Centimeters

View Lock

Lock to Obj... Lock To 3D Cursor Camera to View

3D Cursor Location: X 0.15 m Y 0 m Z 0.7 m Rotation: X 0° Y 0° Z 0° XYZ Euler

Collections Annotations

Scene Collection Collection Camera Cube Light Plane

Plane

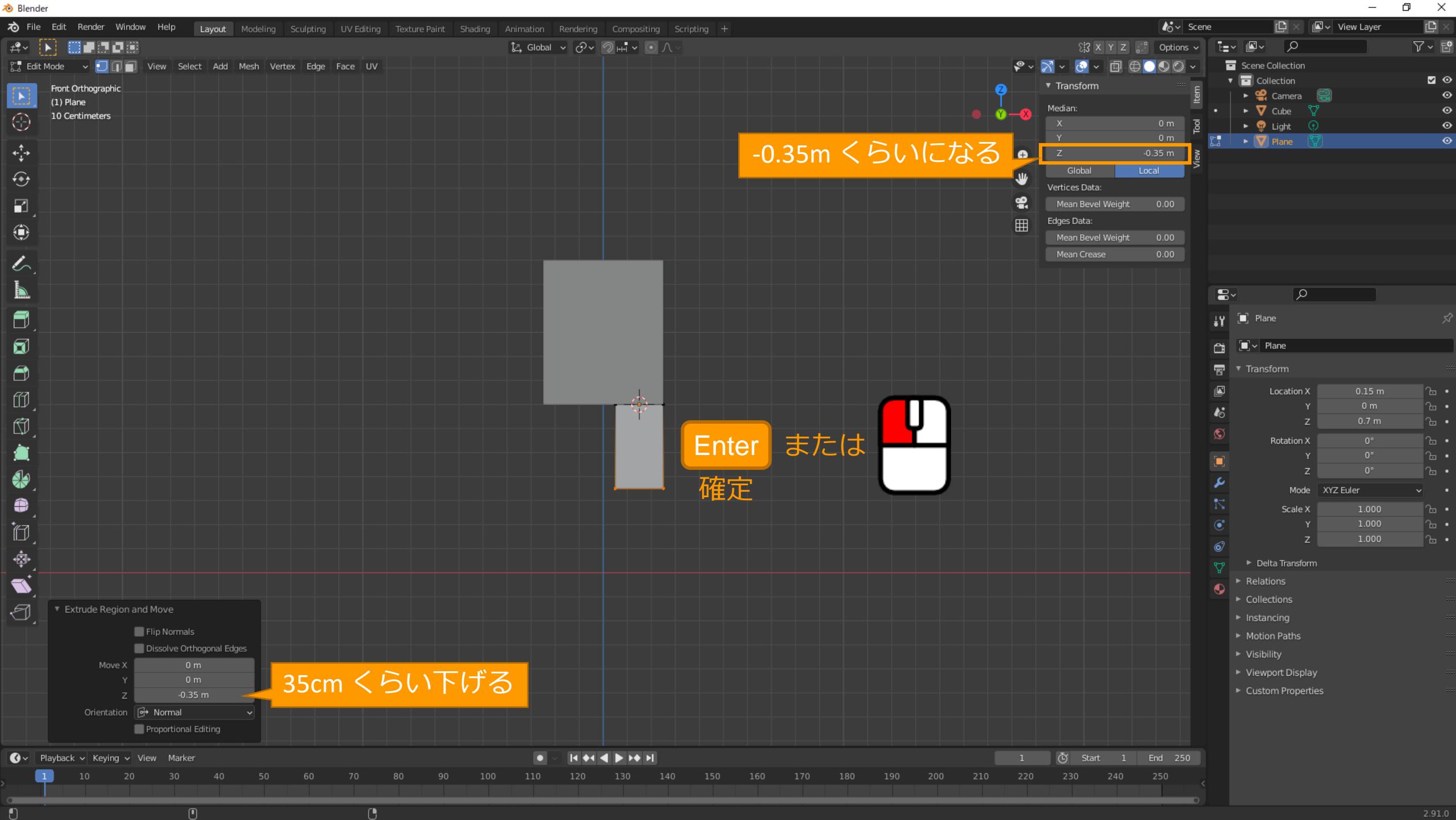
Transform Location X 0.15 m Y 0 m Z 0.7 m Rotation X 0° Y 0° Z 0° Mode XYZ Euler Scale X 1.000 Y 1.000 Z 1.000 Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

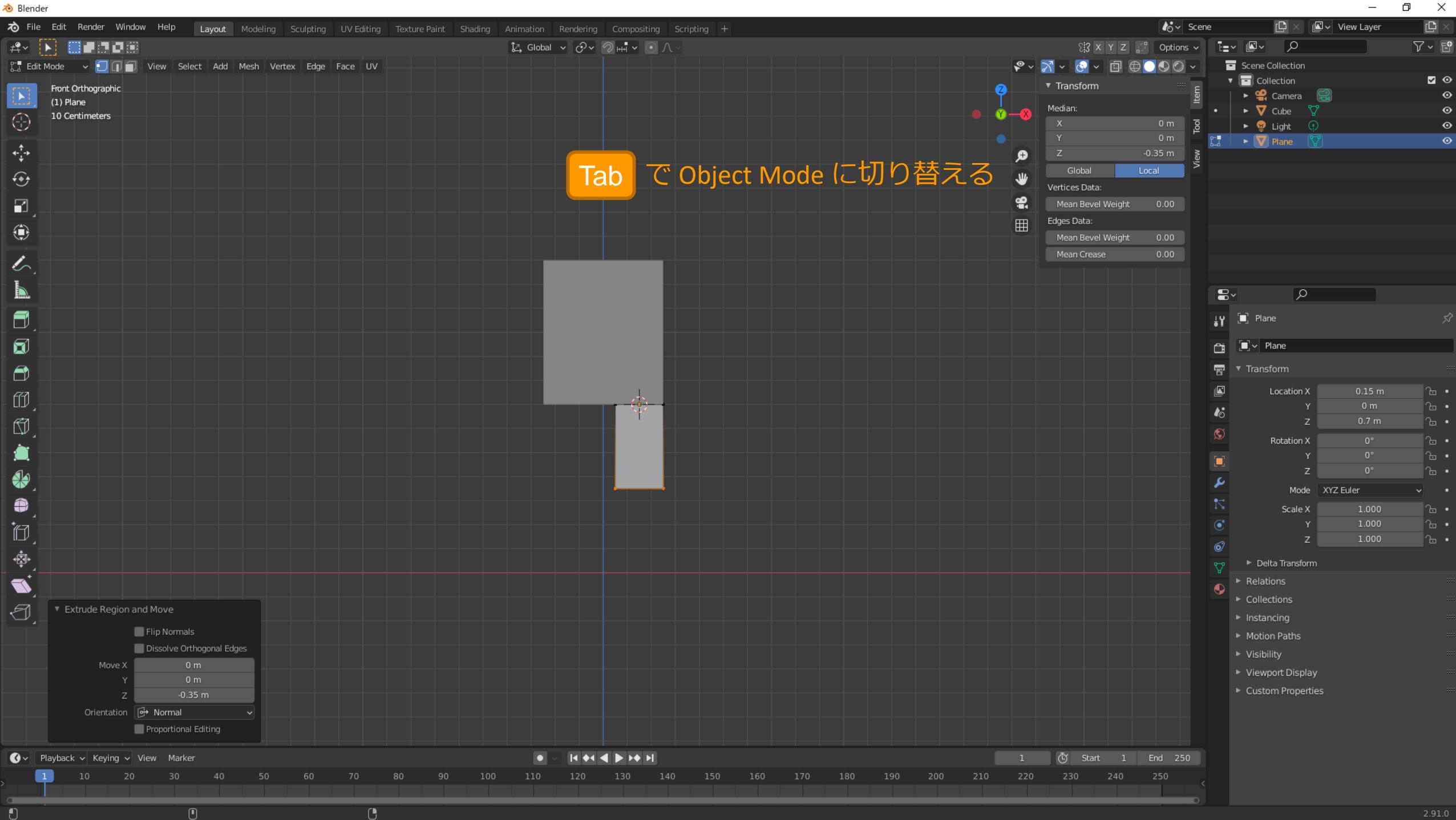
Playback Keying View Marker

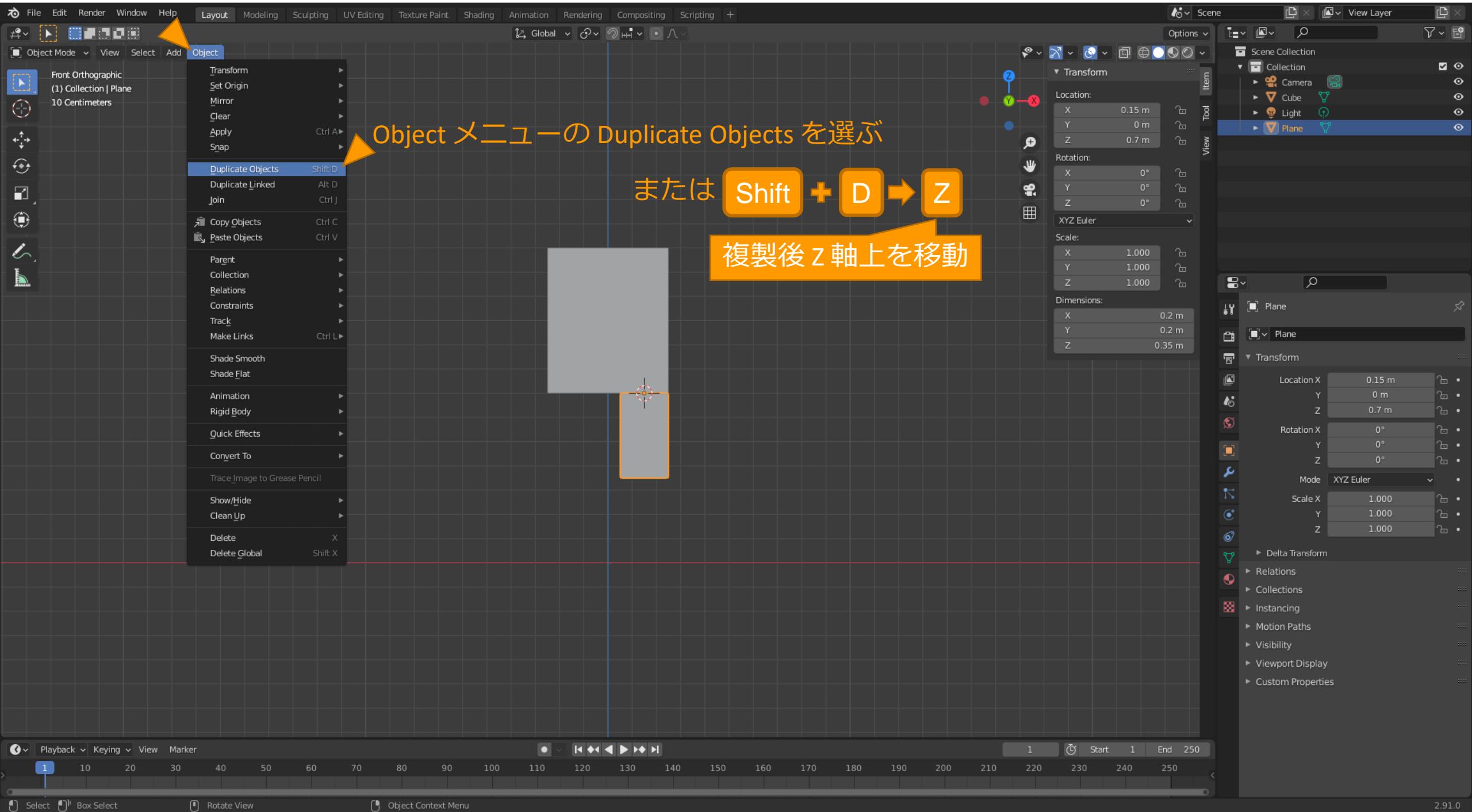
1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

1 Select Box Select Rotate View Call Menu

高さを調整







File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Layer Options

D: -0.3418 m (0.3418 m) along global Z

Front Orthographic
(1) Collection | Plane.001
10 Centimeters

Transform

Location:

X	0.15 m
Y	0 m
Z	0.35818 m

Rotation:

X	0°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

Collection

- Camera
- Cube
- Light
- Plane
- Plane.001

View Item Tool

Plane.001

Plane.001

Transform

Location X	0.15 m
Y	0 m
Z	0.35818 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

高さを調整

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

1 Pan View Set 3D Cursor Move

2.91.0

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Plane.001
10 Centimeters

Transform

Location:
X 0.15 m
Y 0 m
Z 0.35 m

Rotation:
X 0°
Y 0°
Z 0°

XYZ Euler

Scale:
X 1.000
Y 1.000
Z 1.000

Dimensions:
X 0.2 m
Y 0.2 m
Z 0.35 m

Duplicate Objects

Move X 0 m
Y 0 m
Z -0.35 m

Orientation Global

Playback Keying View Marker

Scene

Search

Scene Collection

Collection

Camera Cube Light Plane Plane.001

Item Tool View

Plane.001

Plane.001

Transform

Location X 0.15 m
Y 0 m
Z 0.35 m

Rotation X 0°
Y 0°
Z 0°

Mode XYZ Euler

Scale X 1.000
Y 1.000
Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Enter または 確定

35cm 下げて元の箱の底の位置 (0.2, 0.2, 0.35) に配置する

Duplicate (複製)

■ Duplicate Objects

- データ自身を複製する
- それぞれのデータは独立して変形できる

■ Duplicate Linked

- 同じデータを共有する
- 一方を変形するともう一方も変形する

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Plane.001
10 Centimeters

Selection to Cursor 8
Selection to Cursor (Keep Offset) 7
Selection to Active 9
Cursor to Grid 4
Selection to Grid 6
Cursor to World Origin 1
Cursor to Active 3
Shift + S → または 1

3D カーソルを原点に移動する

Duplicate Objects
Linked
Move X: 0 m
Y: 0 m
Z: -0.35 m
Orientation: Global
Proportional Editing

Scene Collection
Collection
Camera
Cube
Light
Plane
Plane.001

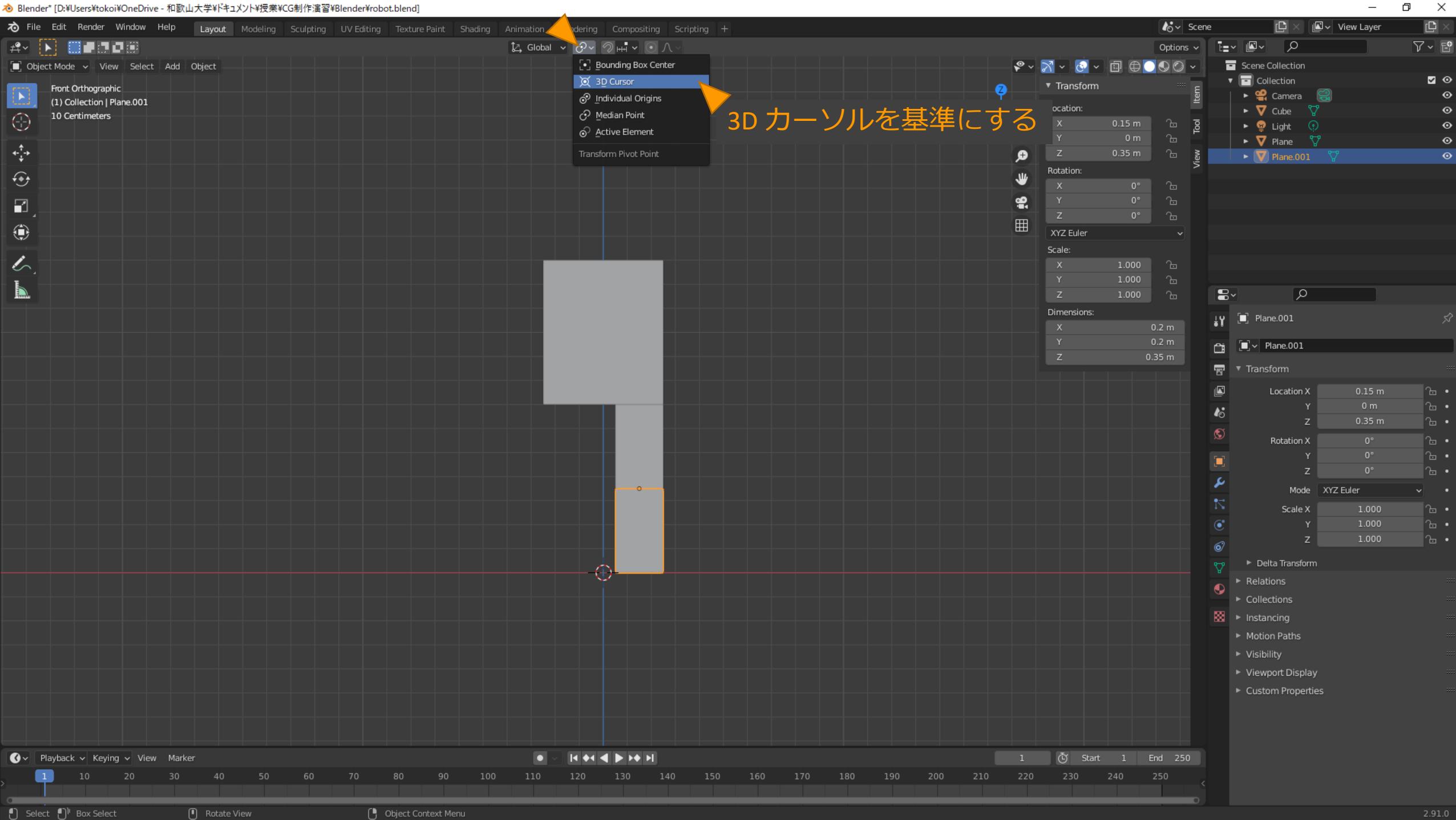
Transform
Location:
X: 0.15 m
Y: 0 m
Z: 0.35 m
Rotation:
X: 0°
Y: 0°
Z: 0°
XYZ Euler
Scale:
X: 1.000
Y: 1.000
Z: 1.000
Dimensions:
X: 0.2 m
Y: 0.2 m
Z: 0.35 m

Plane.001
Transform
Location X: 0.15 m
Y: 0 m
Z: 0.35 m
Rotation X: 0°
Y: 0°
Z: 0°
Mode: XYZ Euler
Scale X: 1.000
Y: 1.000
Z: 1.000

Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Viewport Display
Custom Properties

Playback View Marker
1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

2.91.0



File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Plane.001
10 Centimeters

Transform

Location:

X	0.15 m
Y	0 m
Z	0.35 m

Rotation:

X	0°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Plane.001

Plane.001

Transform

Location X	0.15 m
Y	0 m
Z	0.35 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Cancel Begin Move

2.91.0

ドラッグして
矩形選択

Alt + D → Enter または

同じところに重ねる

Alt + D → Enter または

Plane.003

Plane.003

Transform

Location:

- X 0.15 m
- Y 0 m
- Z 0.35 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.2 m
- Y 0.2 m
- Z 0.35 m

Duplicate Linked

Linked

Move X 0 m

Y 0 m

Z 0 m

Orientation Global

Proportional Editing

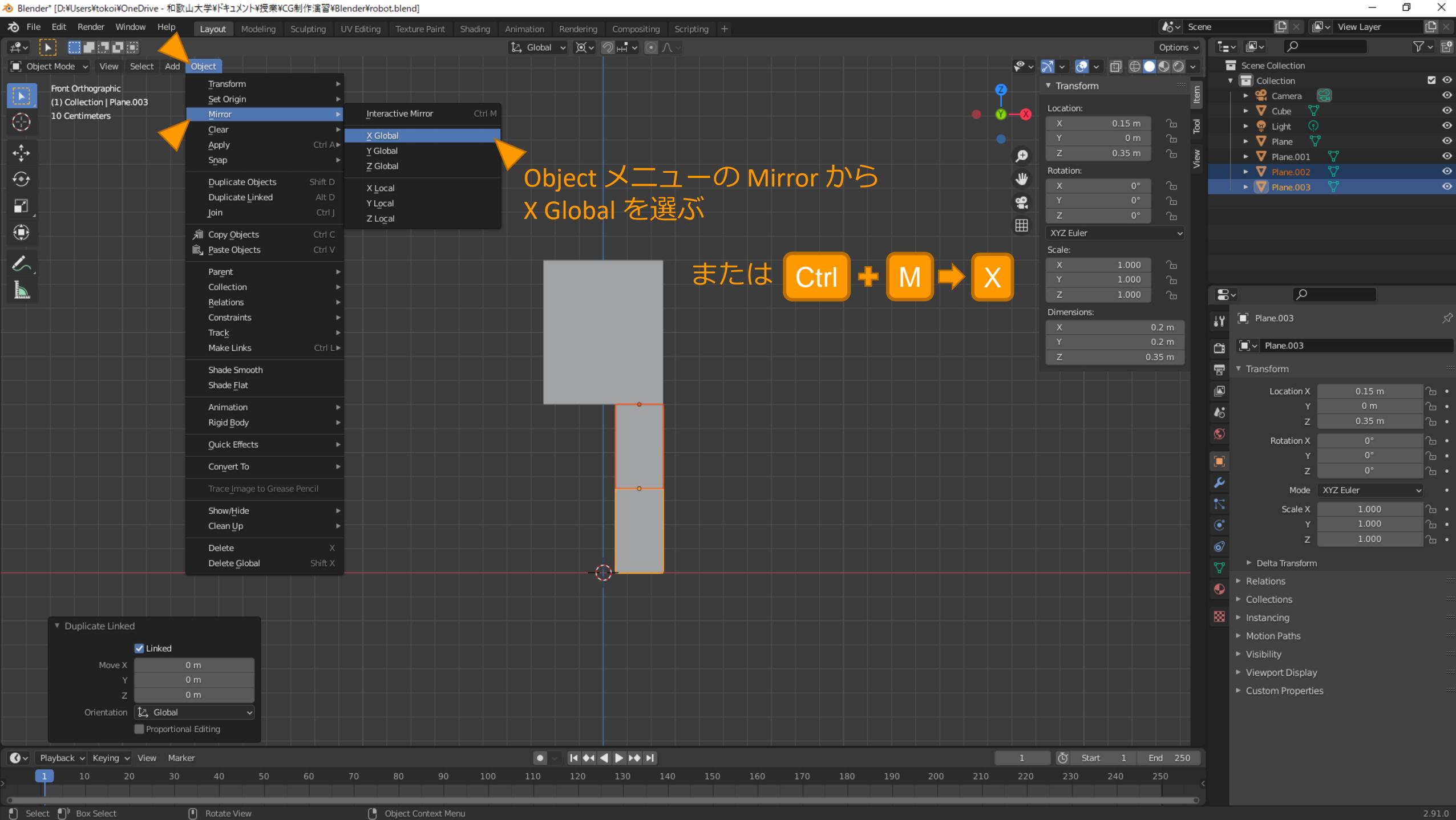
Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Object Context Menu

2.91.0



File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global Viewport Options

Mirror along global X

Front Orthographic
(1) Collection | Plane.003
10 Centimeters

Transform

- Location:

X	-0.15 m
Y	0 m
Z	0.35 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Camera
 - Cube
 - Light
 - Plane
 - Plane.001
 - Plane.002
 - Plane.003

View Layer

Item Tool View

Search

Plane.003

Plane.003

Transform

- Location X: -0.15 m
- Location Y: 0 m
- Location Z: 0.35 m
- Rotation X: 0°
- Rotation Y: 0°
- Rotation Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000
- Scale Y: 1.000
- Scale Z: 1.000

Duplicate Linked

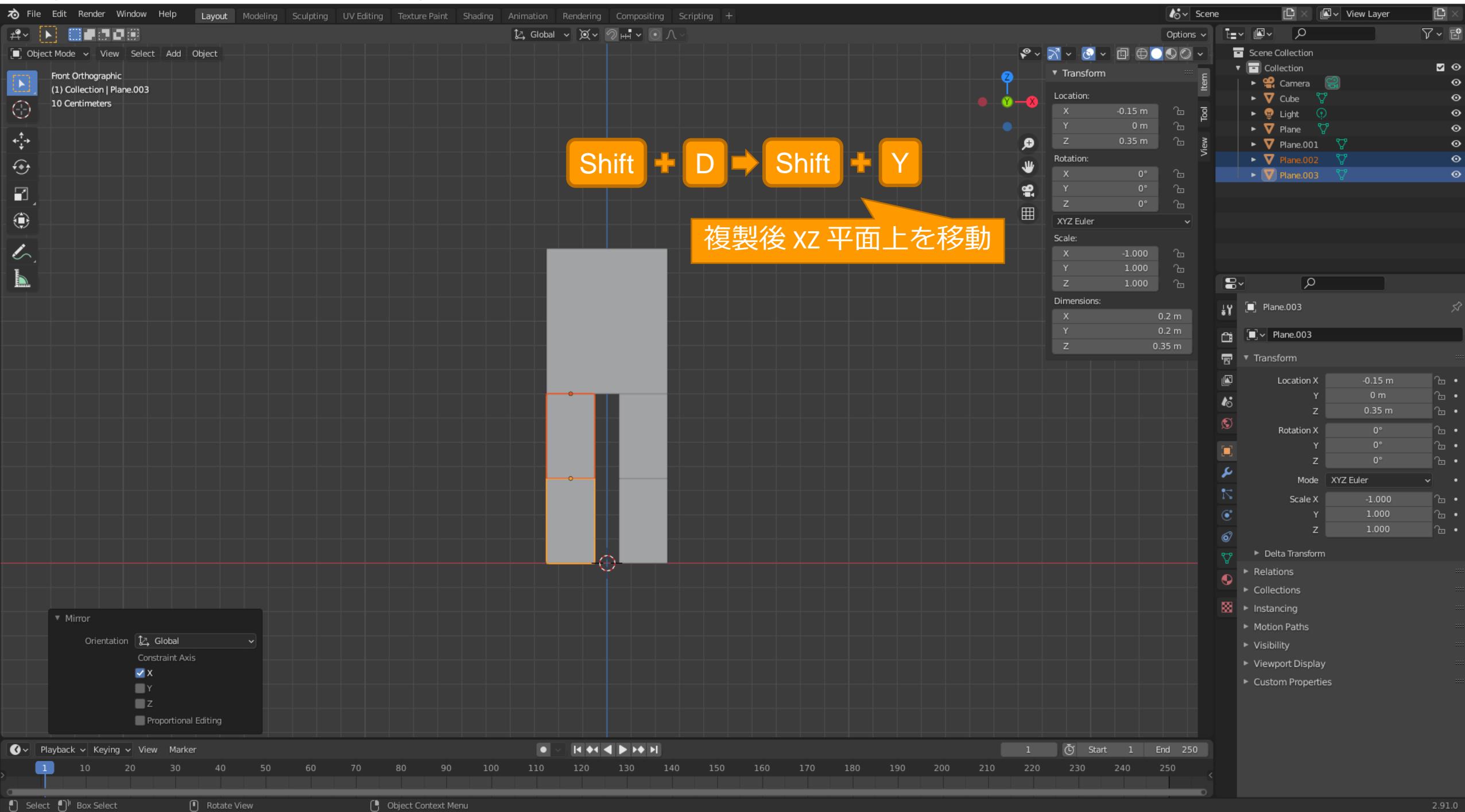
- Linked
- Move X: 0 m
- Move Y: 0 m
- Move Z: 0 m
- Orientation: Global
- Proportional Editing

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Confirm Cancel Xaxis Yaxis Zaxis X plane Y plane Z plane Clear Constraints Snap Invert Snap Toggle Move Rotate Resize Automatic Constraint Automatic Constraint Plane

2.91.0



Front Orthographic
(1) Collection | Plane.005
10 Centimeters

D: -0.2026 m D: 0.5919 m (0.6256 m) locking global Y

Transform

- Location:

X	-0.35256 m
Y	0 m
Z	0.94186 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Mirror

- Orientation: Global
- Constraint Axis:
 - X
 - Y
 - Z
- Proportional Editing

Scene Collection

- Collection
 - Camera
 - Cube
 - Light
 - Plane
 - Plane.001
 - Plane.002
 - Plane.003
 - Plane.004
 - Plane.005

Plane.005

Transform

- Location X: -0.35256 m
- Location Y: 0 m
- Location Z: 0.94186 m
- Rotation X: 0°
- Rotation Y: 0°
- Rotation Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000
- Scale Y: 1.000
- Scale Z: 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback View Marker

Start: 1 End: 250

2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Plane.005
10 Centimeters

Transform

- Location:

X	-0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Duplicate Objects

- Linked
- Move X: -0.2 m
- Y: 0 m
- Z: 0.6 m
- Orientation: Global
- Proportional Editing

Scene Collection

- Collection
 - Camera
 - Cube
 - Light
 - Plane
 - Plane.001
 - Plane.002
 - Plane.003
 - Plane.004
 - Plane.005

Search: Plane.005

Transform

- Location X: -0.35 m
- Y: 0 m
- Z: 0.95 m
- Rotation X: 0°
- Y: 0°
- Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000
- Y: 1.000
- Z: 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

1 Pan View Set 3D Cursor Move

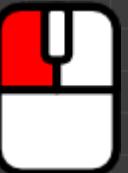
2.91.0

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Plane.005
10 Centimeters

Alt + D → Enter または 

同じところに重ねる

Duplicate Objects
Linked
Move X: -0.2 m
Y: 0 m
Z: 0.6 m
Orientation: Global
Proportional Editing

Scene Collection
Collection
Camera
Cube
Light
Plane
Plane.001
Plane.002
Plane.003
Plane.004
Plane.005

Transform
Location:
X: -0.35 m
Y: 0 m
Z: 0.95 m
Rotation:
X: 0°
Y: 0°
Z: 0°
XYZ Euler
Scale:
X: -1.000
Y: 1.000
Z: 1.000
Dimensions:
X: 0.2 m
Y: 0.2 m
Z: 0.35 m

Plane.005
Plane.005
Transform
Location X: -0.35 m
Y: 0 m
Z: 0.95 m
Rotation X: 0°
Y: 0°
Z: 0°
Mode: XYZ Euler
Scale X: -1.000
Y: 1.000
Z: 1.000
Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Viewport Display
Custom Properties

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

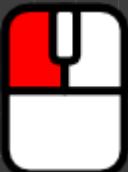
Select Box Select Pan View Set 3D Cursor Move

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic (1) Collection | Plane.007 10 Centimeters

Ctrl + M → X → Enter または 

Duplicate Linked
Linked
Move X: 0 m
Y: 0 m
Z: 0 m
Orientation: Global
Proportional Editing

Scene Collection
Collection
Camera
Cube
Light
Plane
Plane.001
Plane.002
Plane.003
Plane.004
Plane.005
Plane.006
Plane.007

Transform
Location:
X: -0.35 m
Y: 0 m
Z: 0.95 m
Rotation:
X: 0°
Y: 0°
Z: 0°
XYZ Euler
Scale:
X: -1.000
Y: 1.000
Z: 1.000
Dimensions:
X: 0.2 m
Y: 0.2 m
Z: 0.35 m

Plane.007
Plane.007
Transform
Location X: -0.35 m
Y: 0 m
Z: 0.95 m
Rotation X: 0°
Y: 0°
Z: 0°
Mode: XYZ Euler
Scale X: -1.000
Y: 1.000
Z: 1.000
Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Viewport Display
Custom Properties

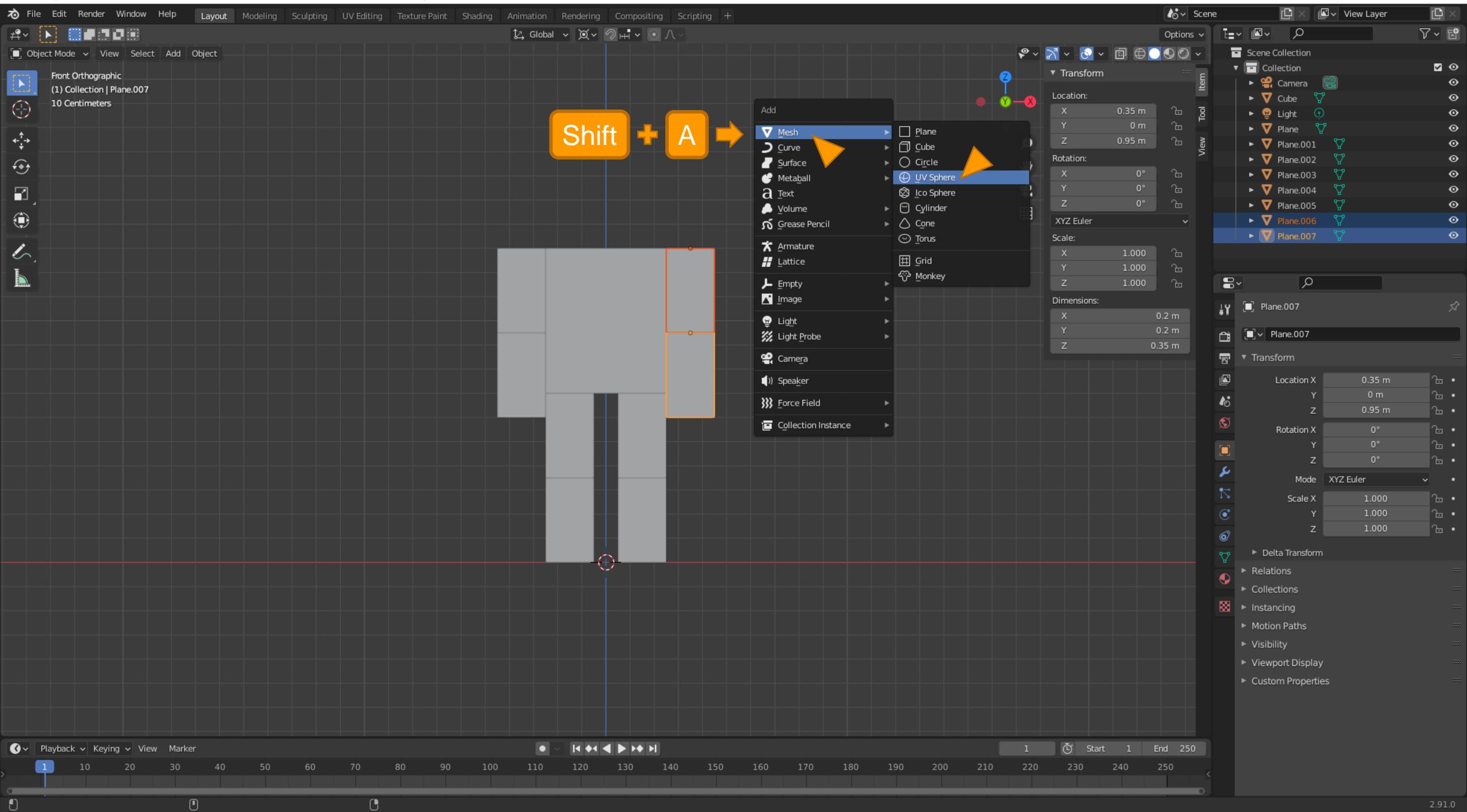
Playback View Marker

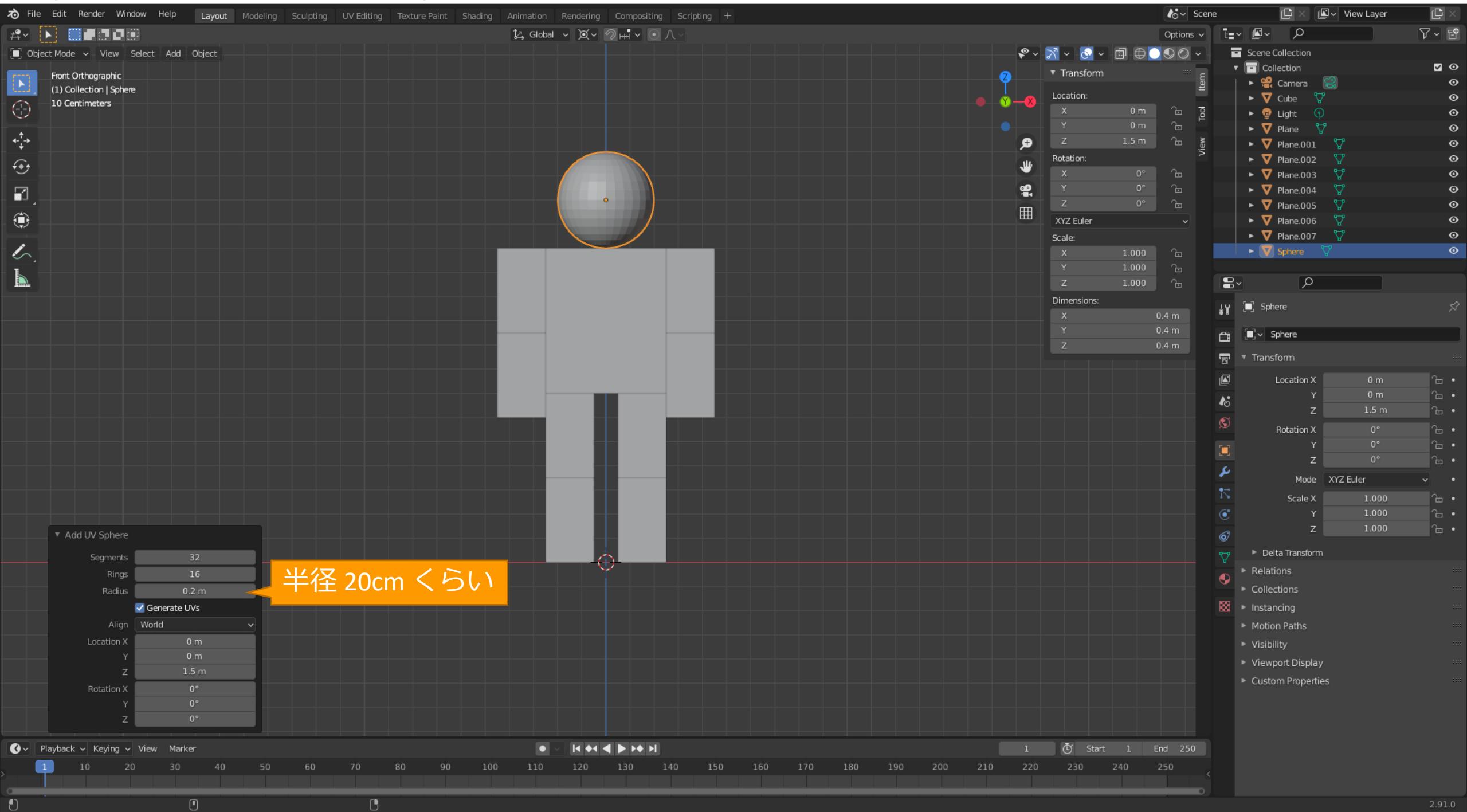
1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu

2.91.0





File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic (1) Collection | Sphere 10 Centimeters

Transform

Location:

- X 0 m
- Y 0 m
- Z 1.5 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.4 m
- Y 0.4 m
- Z 0.4 m

Object Context Menu

- Shade Smooth
- Shade Flat
- Set Origin
- Copy Objects Ctrl C
- Paste Objects Ctrl V
- Duplicate Objects Shift D
- Duplicate Linked Alt D
- Rename Active Object... F2
- Mirror
- Snap
- Parent
- Move to Collection M
- Insert Keyframe... I
- Delete X

Scene Collection

Collection

- Camera
- Cube
- Light
- Plane
- Plane.001
- Plane.002
- Plane.003
- Plane.004
- Plane.005
- Plane.006
- Plane.007
- Sphere

Sphere

Transform

Location X 0 m Y 0 m Z 1.5 m

Rotation X 0° Y 0° Z 0°

Mode XYZ Euler

Scale X 1.000 Y 1.000 Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu

2.91.0

The screenshot displays the Blender 2.91 interface in Object Mode. A 3D view shows a robot model with a sphere selected, highlighted by an orange outline. The Properties panel on the right shows the sphere's transformation values: Location (X: 0 m, Y: 0 m, Z: 1.5 m), Rotation (X: 0°, Y: 0°, Z: 0°), and Scale (X: 1.000, Y: 1.000, Z: 1.000). A context menu is open over the sphere, with the 'Shade Smooth' option highlighted. The bottom bar shows playback controls and frame 1 selected.

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Sphere
10 Centimeters

Transform

Location:

X	0 m
Y	0 m
Z	1.5 m

Rotation:

X	0°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions: 0.4 m

Scene Collection

Collection

- Camera
- Cube
- Light
- Plane
- Plane.001
- Plane.002
- Plane.003
- Plane.004
- Plane.005
- Plane.006
- Plane.007
- Sphere

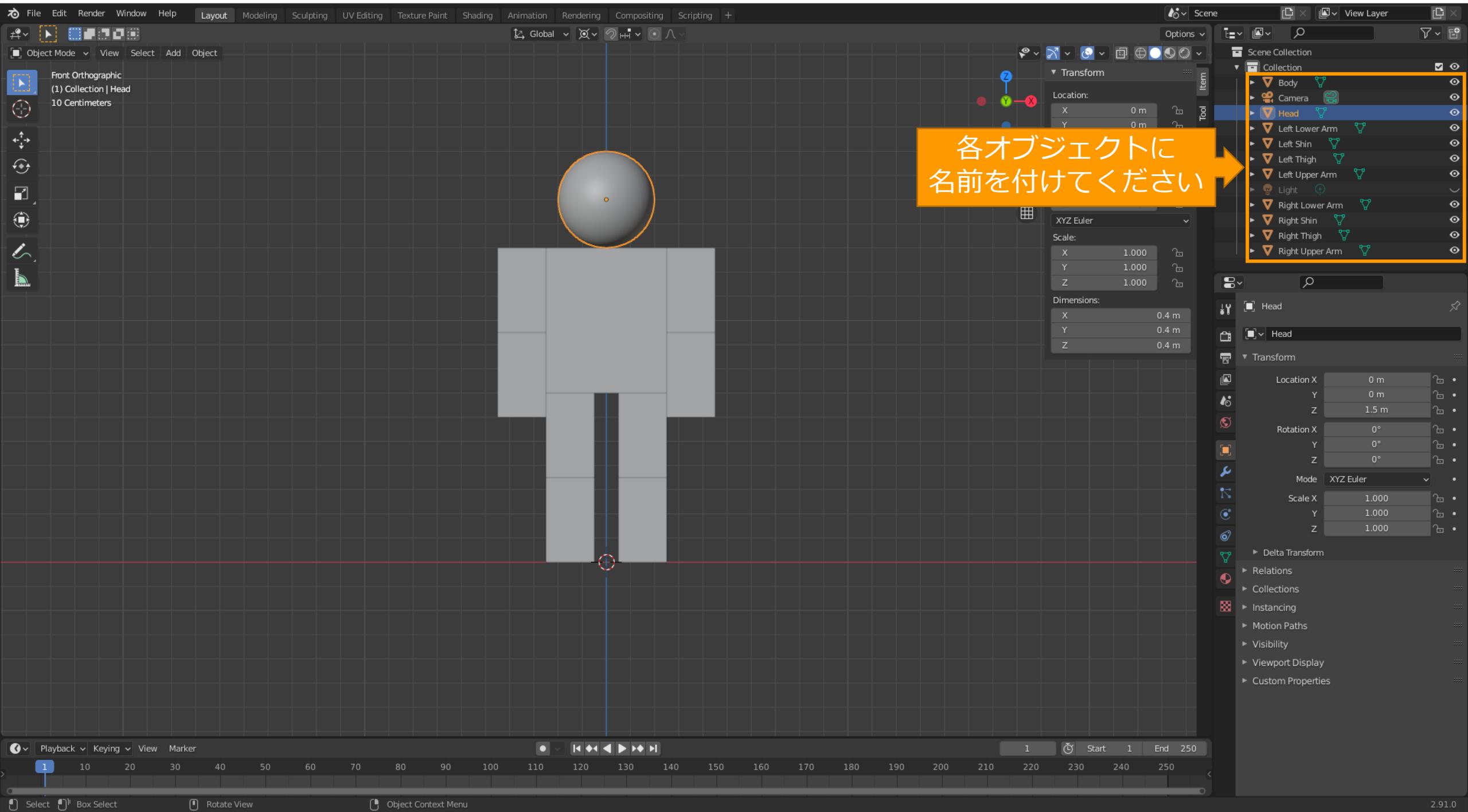
名前の変更はダブルクリック

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu



親子關係

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Head
10 Centimeters

Transform

Location:

X	0 m
Y	0 m
Z	1.5 m

Rotation:

X	0°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions:

X	0.4 m
Y	0.4 m
Z	0.4 m

Scene Collection

Collection

- Body
- Camera
- Head
- Left Lower Arm
- Left Shin
- Left Thigh
- Left Upper Arm
- Light
- Right Lower Arm
- Right Shin
- Right Thigh
- Right Upper Arm

View

Tool

Item

Search

Head

Transform

Location X	0 m
Y	0 m
Z	1.5 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

1 Box Select Rotate View Object Context Menu

2.91.0

左クリックで選択

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic (1) Collection | Body 10 Centimeters

Transform

Location:

- X 0 m
- Y 0 m
- Z 0 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.5 m
- Y 0.3 m
- Z 0.6 m

Shift を押しながら左クリックで追加選択

Scene Collection

- Collection
- Body
- Camera
- Head
- Left Lower Arm
- Left Shin
- Left Thigh
- Left Upper Arm
- Light
- Right Lower Arm
- Right Shin
- Right Thigh
- Right Upper Arm

Body

Transform

- Location X 0 m
- Y 0 m
- Z 0 m
- Rotation X 0°
- Y 0°
- Z 0°
- Mode XYZ Euler
- Scale X 1.000
- Y 1.000
- Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

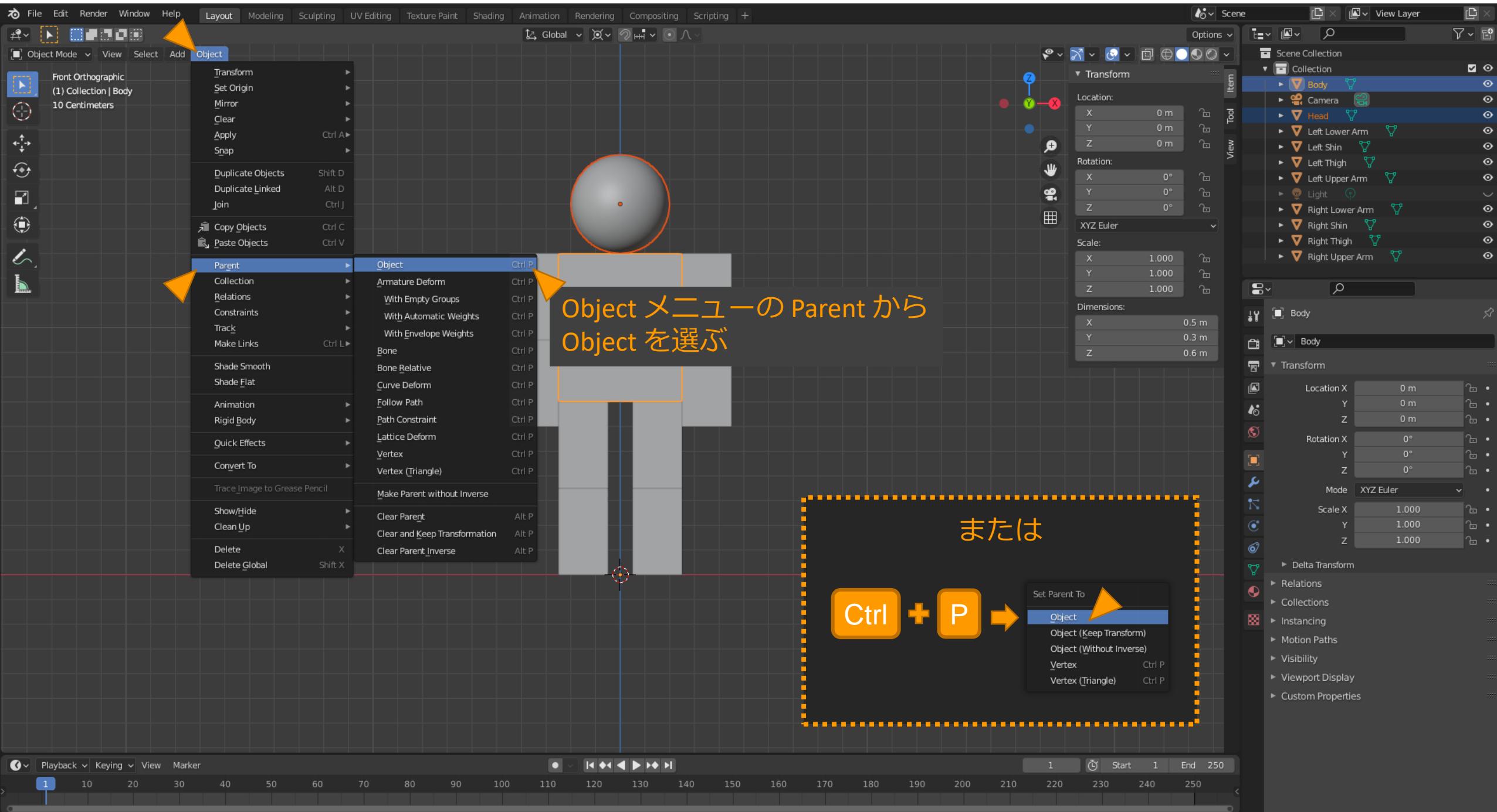
Custom Properties

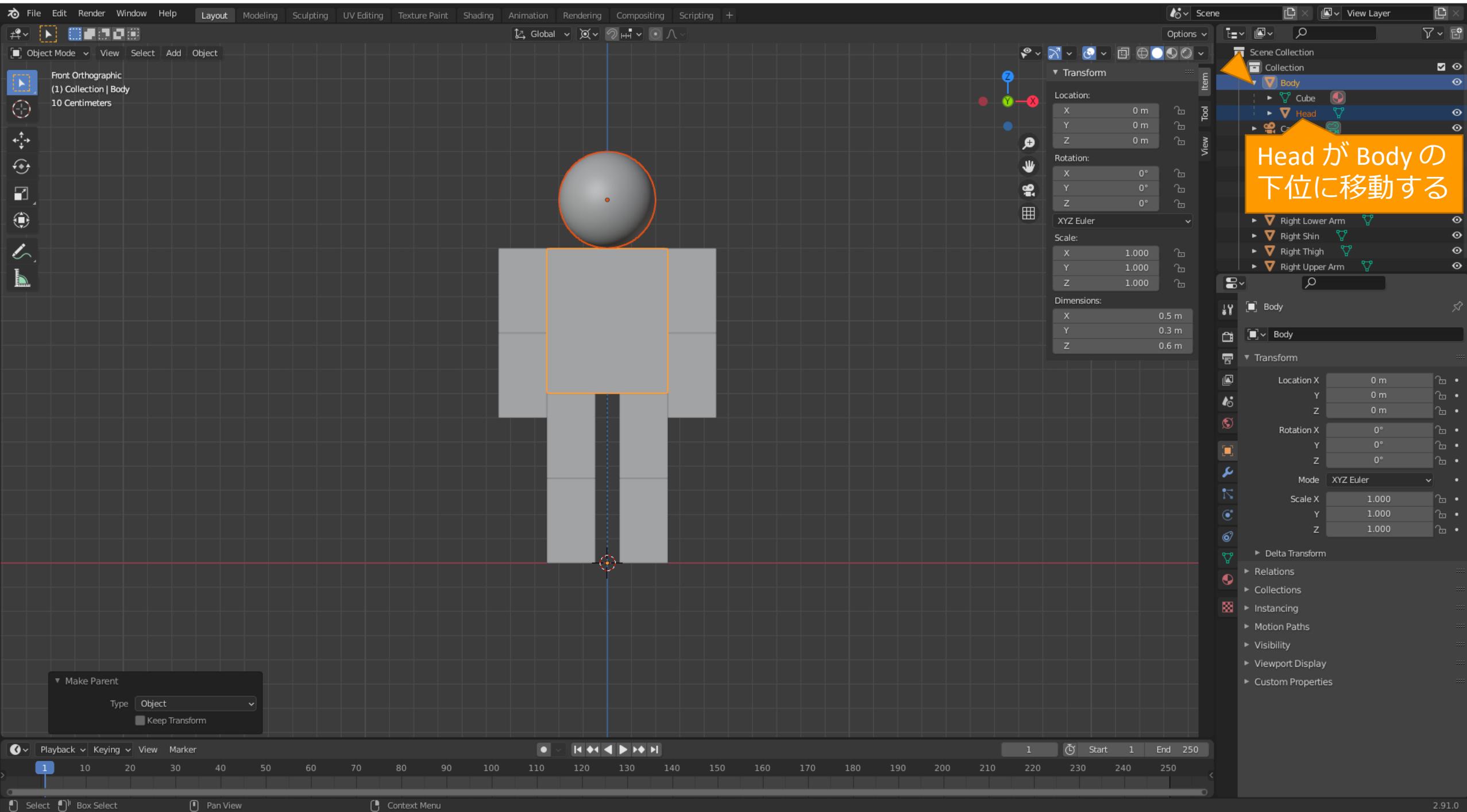
Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu





File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Right Lower Arm
10 Centimeters

Transform

Location:

- X -0.35 m
- Y 0 m
- Z 0.95 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X -1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.2 m
- Y 0.2 m
- Z 0.35 m

Right Lower Arm

Right Lower Arm

Transform

Location X -0.35 m

Y 0 m

Z 0.95 m

Rotation X 0°

Y 0°

Z 0°

Mode XYZ Euler

Scale X -1.000

Y 1.000

Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

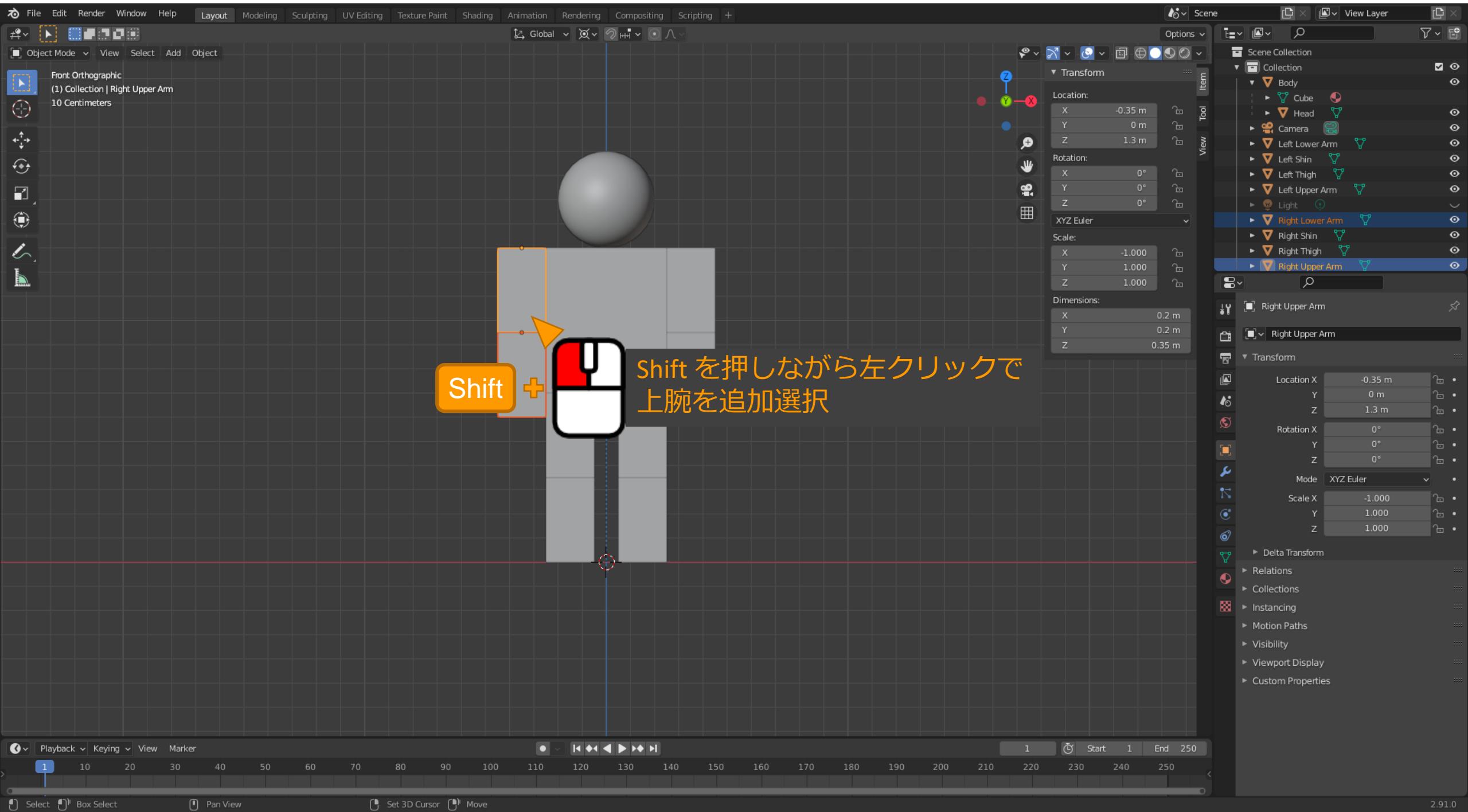
Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

1 2.91.0

前腕を左クリックで選択

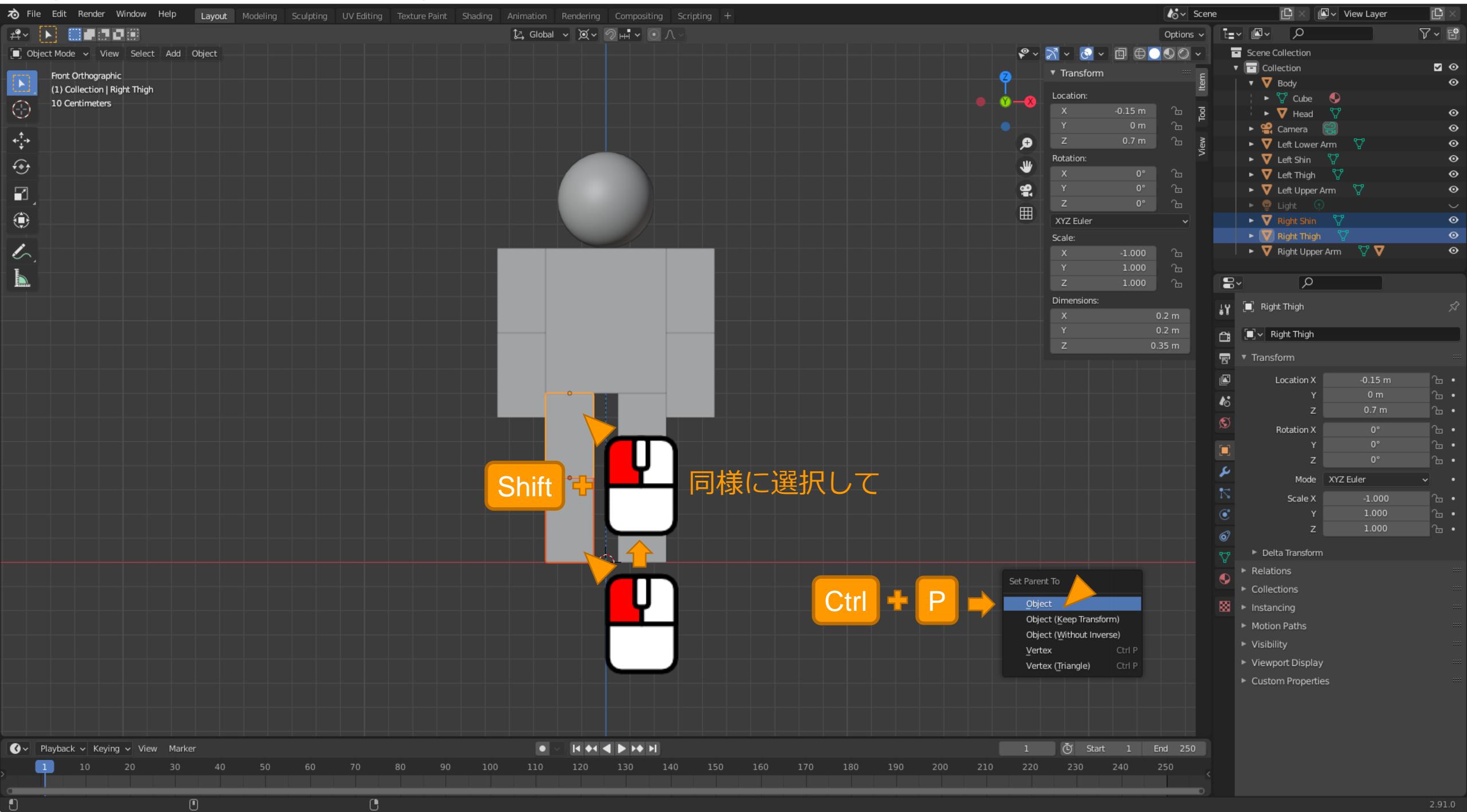


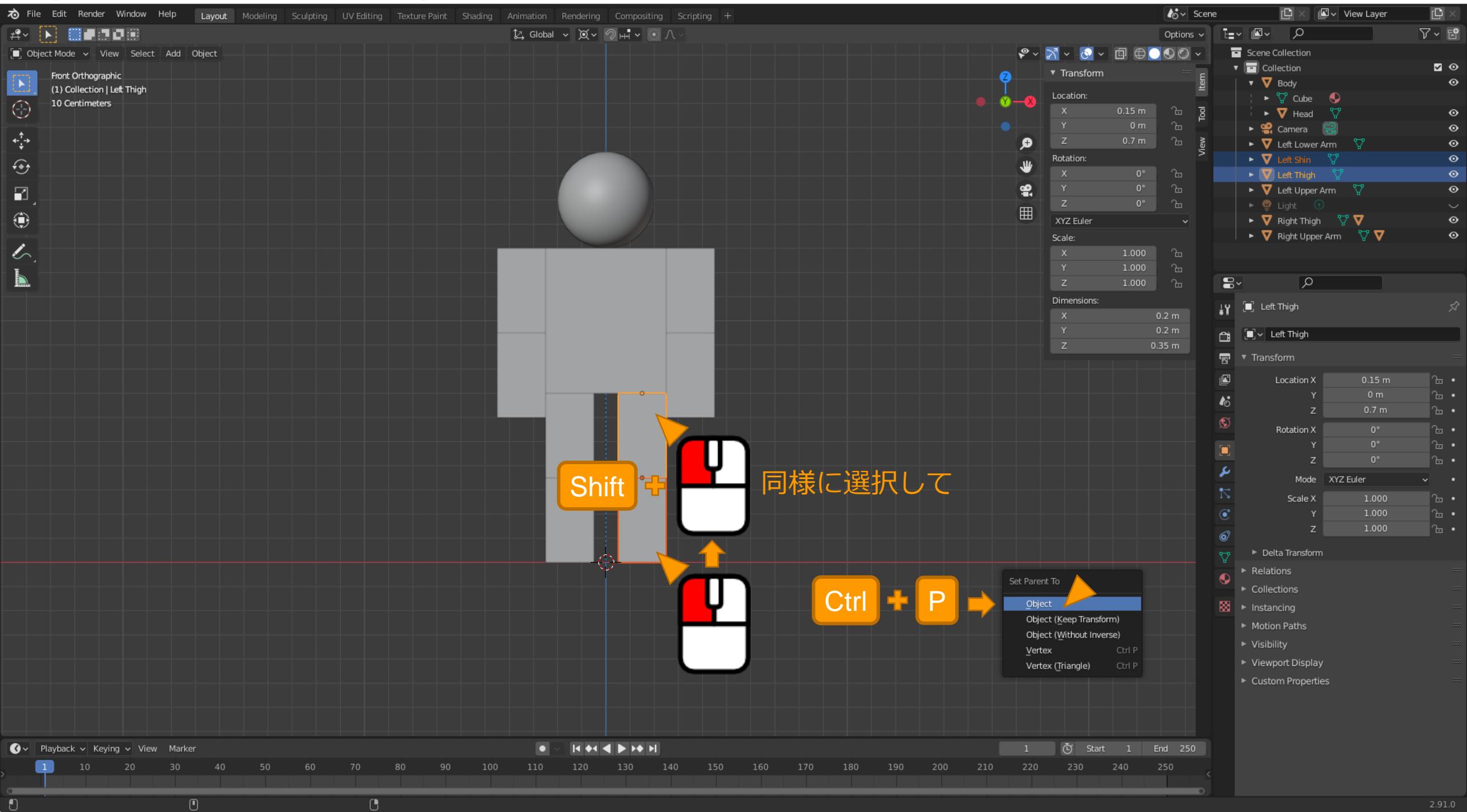
The screenshot shows the Blender 2.91.0 interface in Object Mode. The 3D Viewport displays a 3D model of a robot arm, specifically the right upper arm, which is highlighted with a red selection box. The Outliner panel on the right lists various objects in the scene, including the 'Right Upper Arm' object, which is currently selected and highlighted in blue. A context menu is open at the bottom center, triggered by the keyboard shortcut **Ctrl + P**. The menu options include:

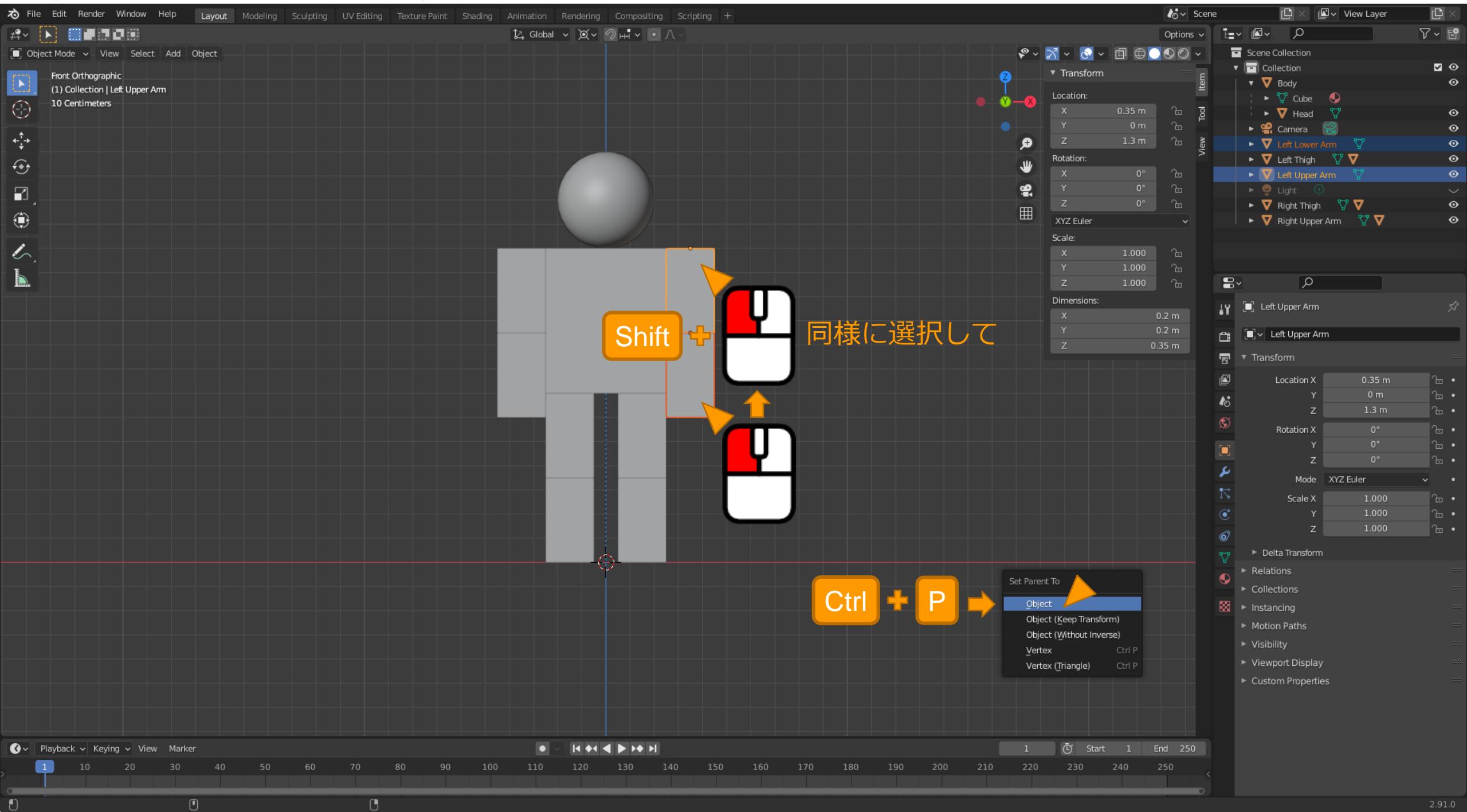
- Object
- Object (Keep Transform)
- Object (Without Inverse)
- Vertex **Ctrl P**
- Vertex (Triangle) **Ctrl P**

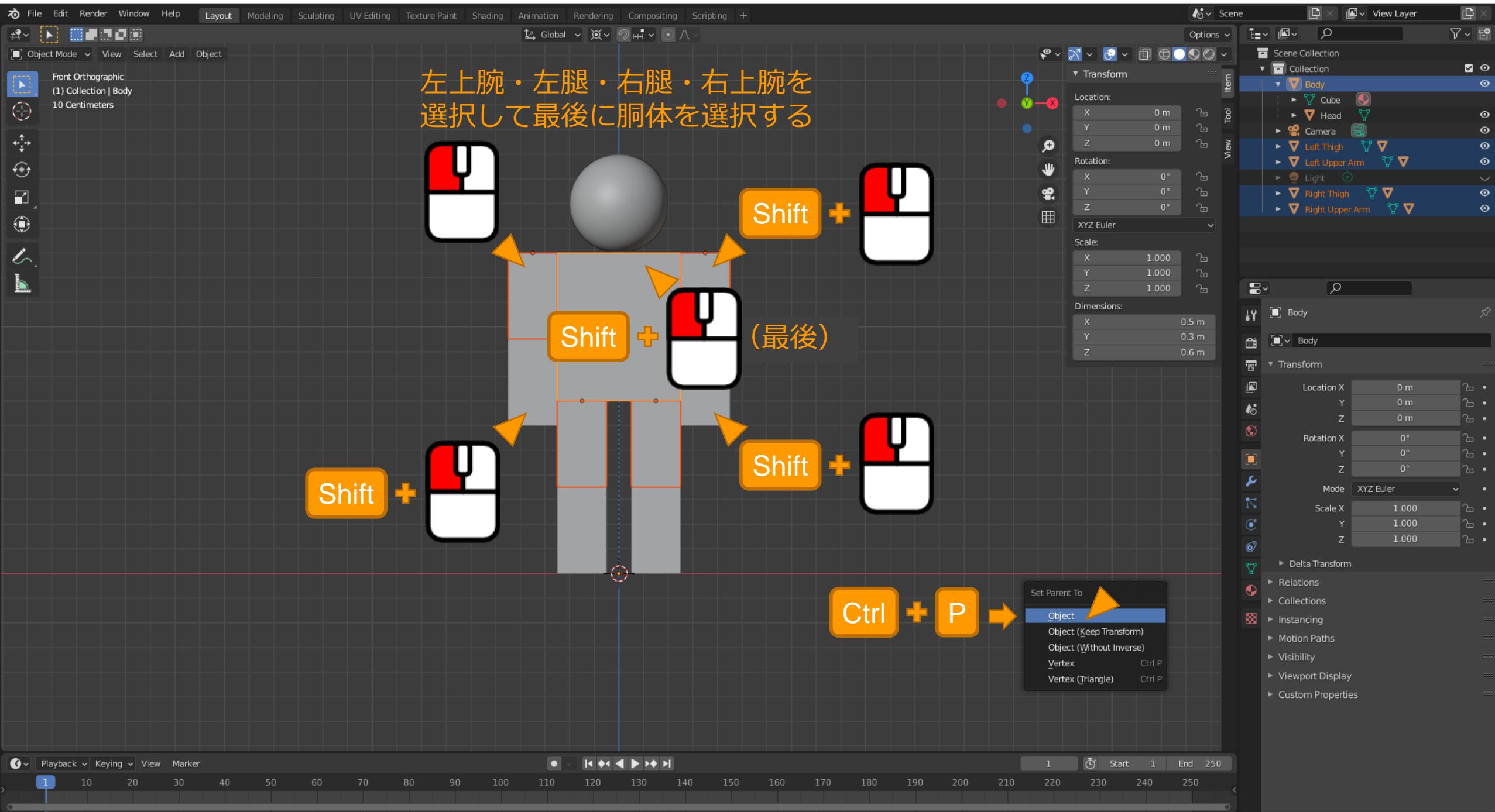
The 3D Viewport shows a front orthographic view of the robot arm. The robot's body is a large gray sphere at the top. Below it, the arm consists of several rectangular components: a vertical black cylinder, a horizontal gray rectangle, and a vertical gray rectangle. The entire assembly is centered on a vertical blue axis.

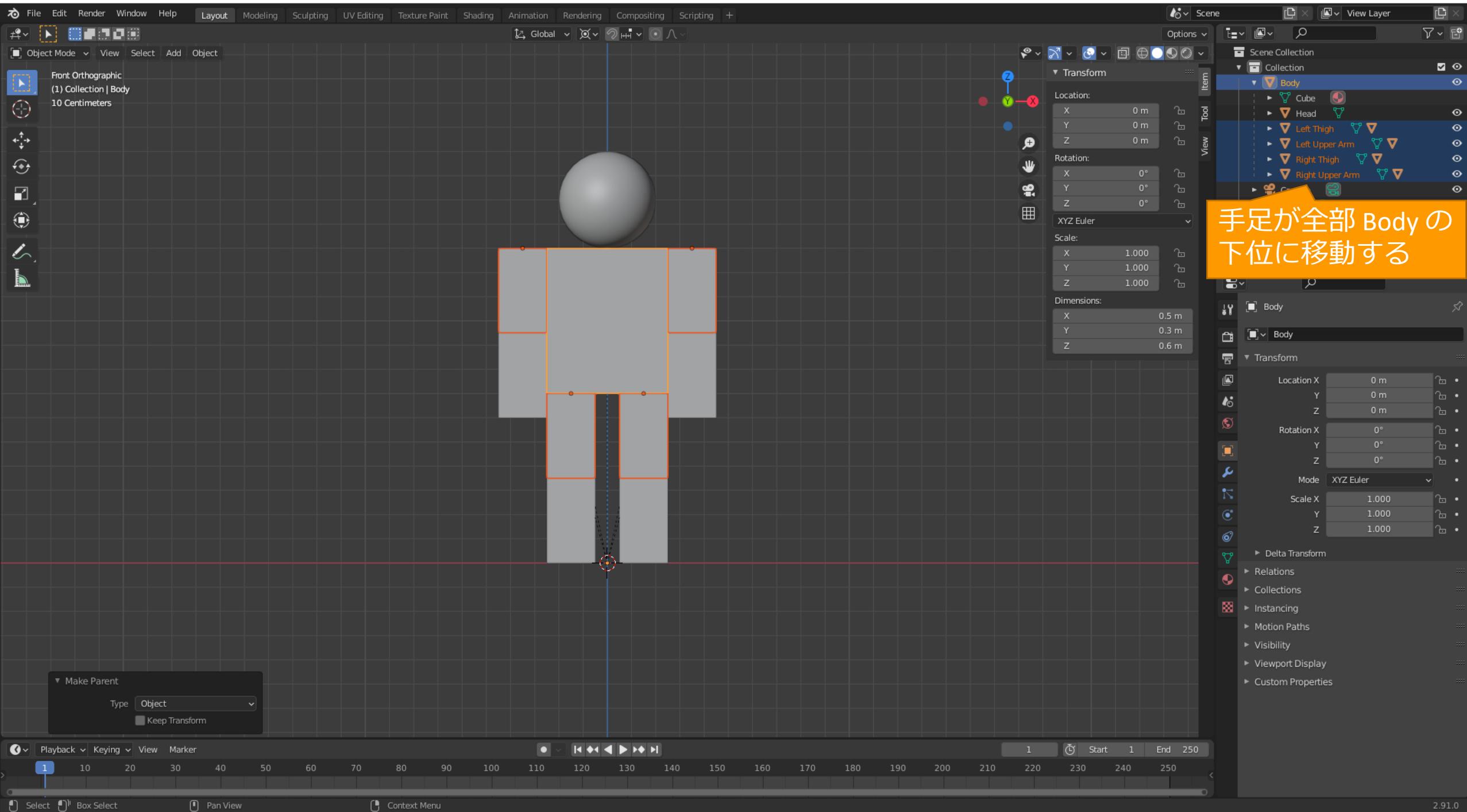
At the bottom of the screen, the Timeline bar shows frame 1, with the playback controls and markers visible. The top navigation bar includes File, Edit, Render, Window, Help, Layout, Modeling, Sculpting, UV Editing, Texture Paint, Shading, Animation, Rendering, Compositing, Scripting, and a plus sign icon.











フォワードキネマティクス

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Global View Options

Object Mode View Select Add Object

Front Orthographic
(1) Collection | Body
10 Centimeters

Transform

Location:

- X 0 m
- Y 0 m
- Z 0 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.5 m
- Y 0.3 m
- Z 0.6 m

Item Tool View

Scene Collection Collection Body Cube Head Left Thigh Left Upper Arm Right Thigh Right Upper Arm Camera Light

Body

Transform

- Location X 0 m
- Y 0 m
- Z 0 m
- Rotation X 0°
- Y 0°
- Z 0°
- Mode XYZ Euler
- Scale X 1.000
- Y 1.000
- Z 1.000

Num Lock / * -

7 8 9 +

4 5 6

1 2 3 Enter

0 .

Make Parent

Type Object

Keep Transform

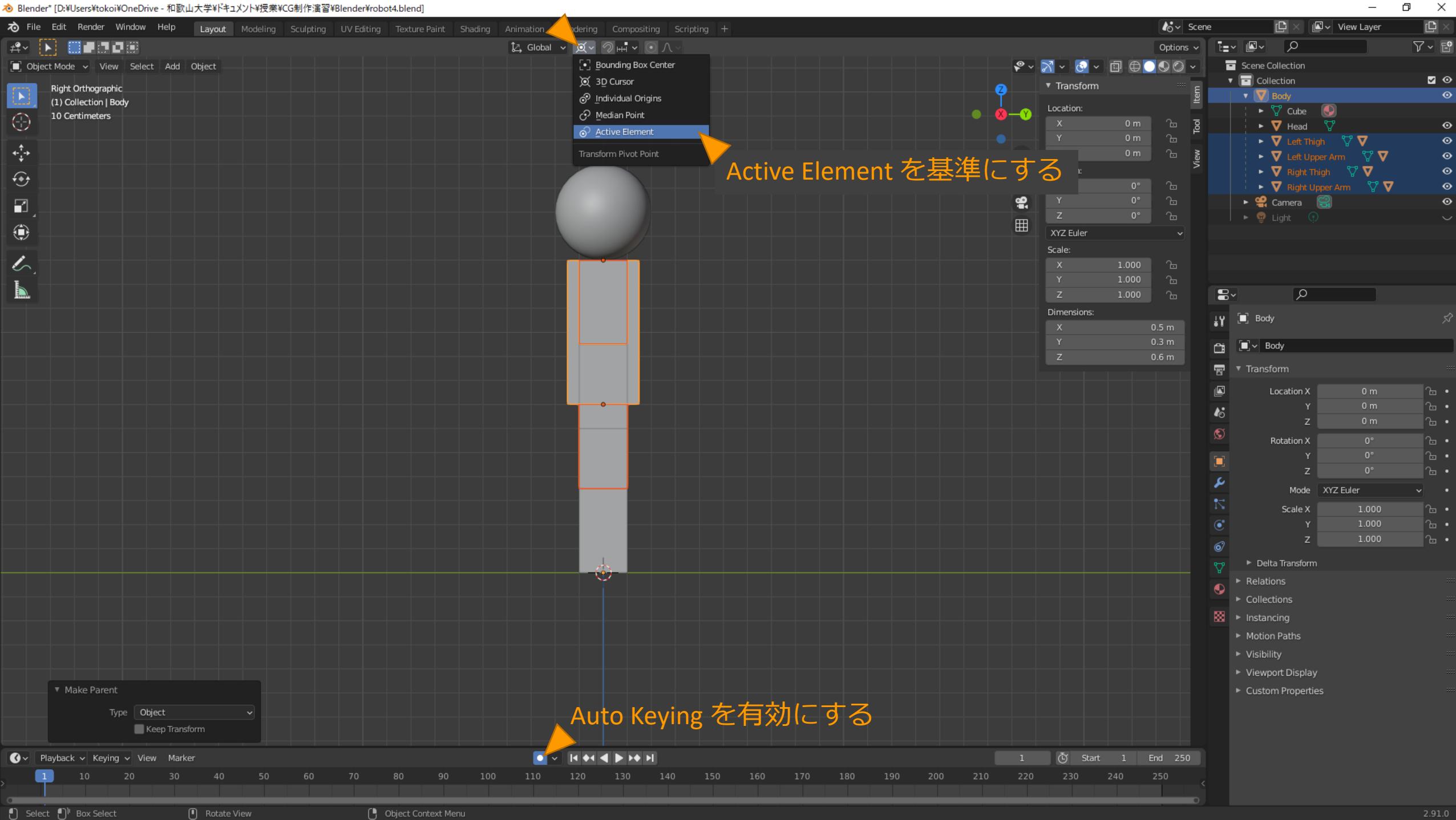
Playback Keying View Marker

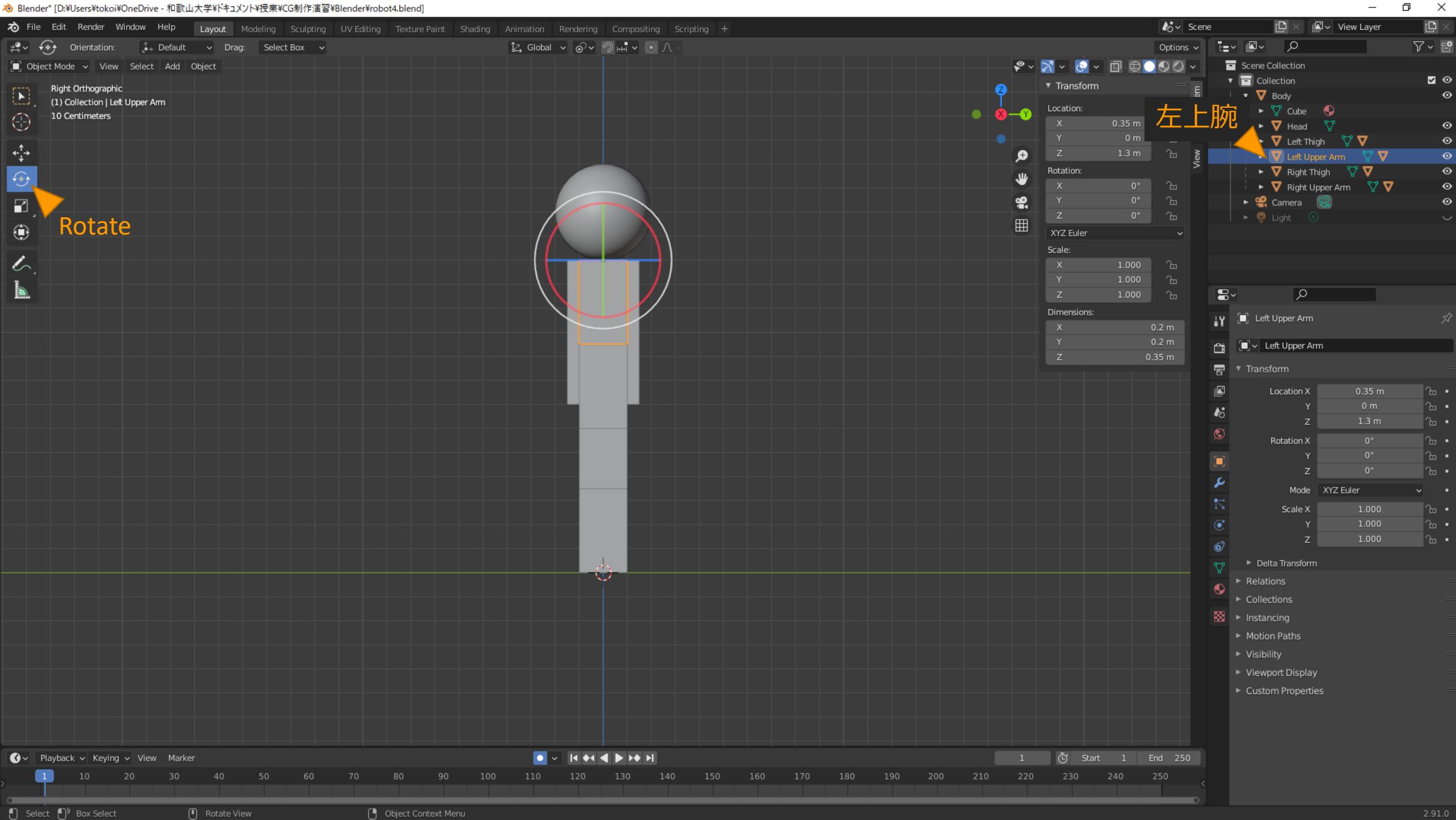
1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Pan View Context Menu

2.91.0





Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global

Rot: -31.50 global
Right Orthographic (1) Collection | Left Upper Arm 10 Centimeters

Transform

Auto Keying On

Location:

X	0.35 m
Y	0 m
Z	1.3 m

Rotation:

X	-31.5°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

Item

Tool

View

x 軸中心に回転する

前腕も一緒に動く

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Confirm Cancel Xaxis Yaxis Zaxis X plane Y plane Z plane Clear Constraints Snap Invert Snap Toggle Move Rotate S Resize Automatic Constraint Automatic Constraint Plane

2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Left Upper Arm 10 Centimeters

Transform

Location:

- X 0.35 m
- Y 0 m
- Z 1.3 m

Rotation:

- X -40°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.2 m
- Y 0.2 m
- Z 0.35 m

Scene Collection

Collection

- Body
- Cube
- Head
- Left Thigh
- Left Upper Arm
- Right Thigh
- Right Upper Arm
- Camera
- Light

View Layer

Item Tool View

Left Upper Arm

Transform

- Location X 0.35 m
- Y 0 m
- Z 1.3 m
- Rotation X -40°
- Y 0°
- Z 0°
- Mode XYZ Euler
- Scale X 1.000
- Y 1.000
- Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Rotate

Angle -40°

Axis X

Orientation Global

Proportional Editing

Playback Keying View Marker

100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

自動的にキーフレームになる

ここも -40° くらいになる

変位は -40° くらい

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Left Upper Arm 10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	-40°
Y	0°
Z	0°
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

XYZ Euler

Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

View Layer

Item Tool View

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	-40°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

右側の操作パネル

タイムライン上にマウスを移動して Shift を押しながら D をタイプ

Shift + D

DeltaX: 0.00 (0.000)

1 10 20 30 40 50 60 70 100 140 150 160 170 180 190 200 210 220 230 240 250

Select Keyframes Box Select Pan View Set Context Menu

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Left Upper Arm 10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	-40°
Y	0°
Z	0°
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

XYZ Euler

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

View

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	-40°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

DeltaX: 30.00 (29.5306)

1 10 20 30 0 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Select Keyframes Box Select Dope Sheet Context Menu

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Left Upper Arm 10 Centimeters

Transform

Location:

- X 0.35 m
- Y 0 m
- Z 1.3 m

Rotation:

- X -40°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X 1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.2 m
- Y 0.2 m
- Z 0.35 m

Left Upper Arm

Transform

- Location X 0.35 m
- Y 0 m
- Z 1.3 m

- Rotation X -40°
- Y 0°
- Z 0°

- Mode XYZ Euler

- Scale X 1.000
- Y 1.000
- Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Scene Collection

Collection

- Body
- Cube
- Head
- Left Thigh
- Left Upper Arm
- Right Thigh
- Right Upper Arm

Camera

Light

Enter または

Playback Keying View Marker

100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

1 10 20 30

Select Box Select Rotate View

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object

Right Orthographic
(16) Collection | Left Upper Arm
10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	-40°
Y	0°
Z	0°
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

XYZ Euler

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

View Layer

Item Tool View

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	-40°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Playback Keying View Marker

Marker 16

0 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

0 16 30 250

Set 3D Cursor Pan View Move

Select Box Select

Blender 2.91.0

Orientation: Default Drag: Select Box Global Auto Keying On

Right Orthographic (16) Collection | Left Upper Arm 10 Centimeters

Rot: 72.02 global

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	32°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

View Layer

Item

Tool

Search

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	32°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

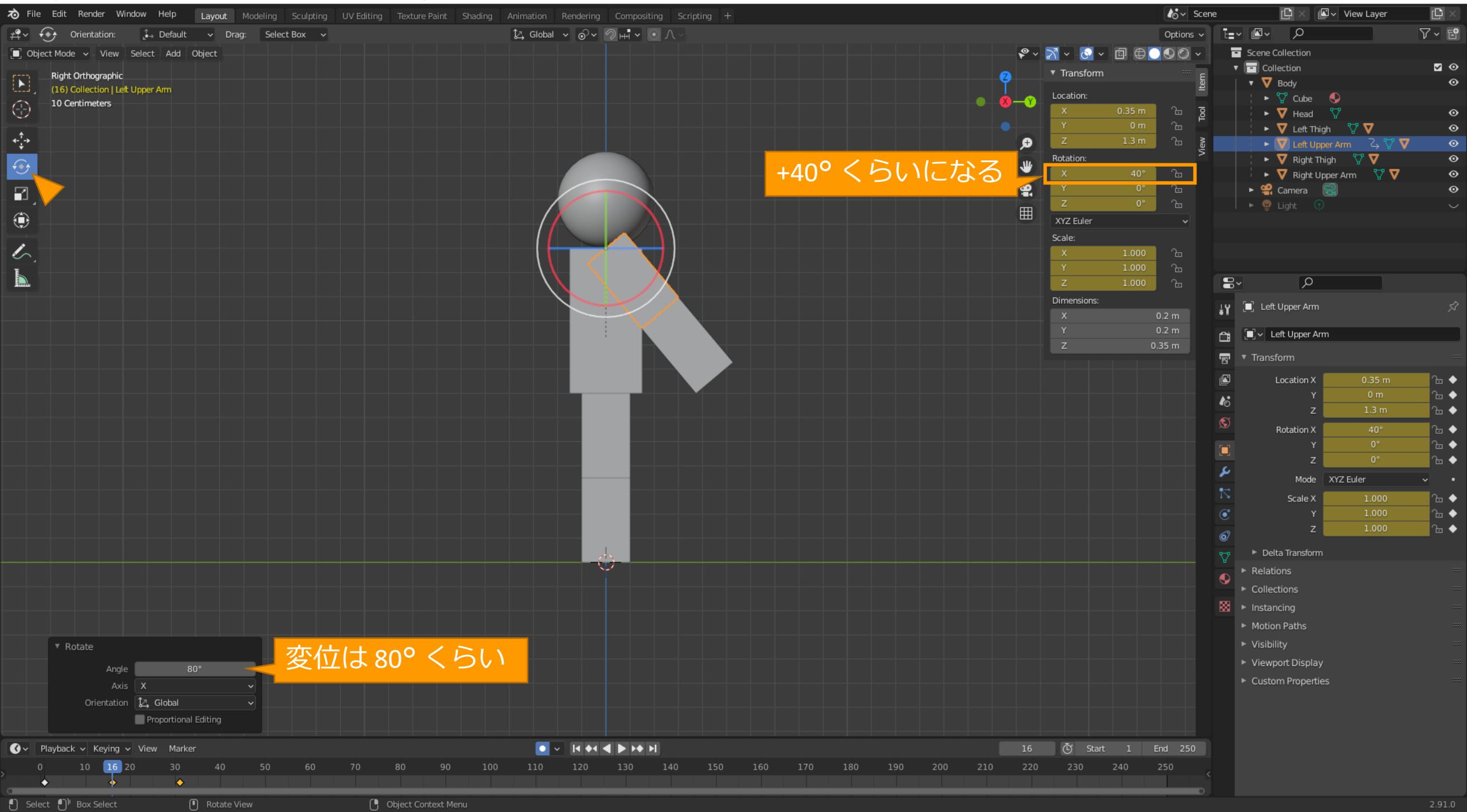
Custom Properties

Playback Keying View Marker

Marker 16 Start 1 End 250

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Confirm Cancel Xaxis Yaxis Zaxis X plane Y plane Z plane Clear Constraints Snap Invert Snap Toggle Move Rotate S Resize Automatic Constraint Automatic Constraint Plane



File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (16) Collection | Left Upper Arm 10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	40°
Y	0°
Z	0°
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

XYZ Euler

View

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	40°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

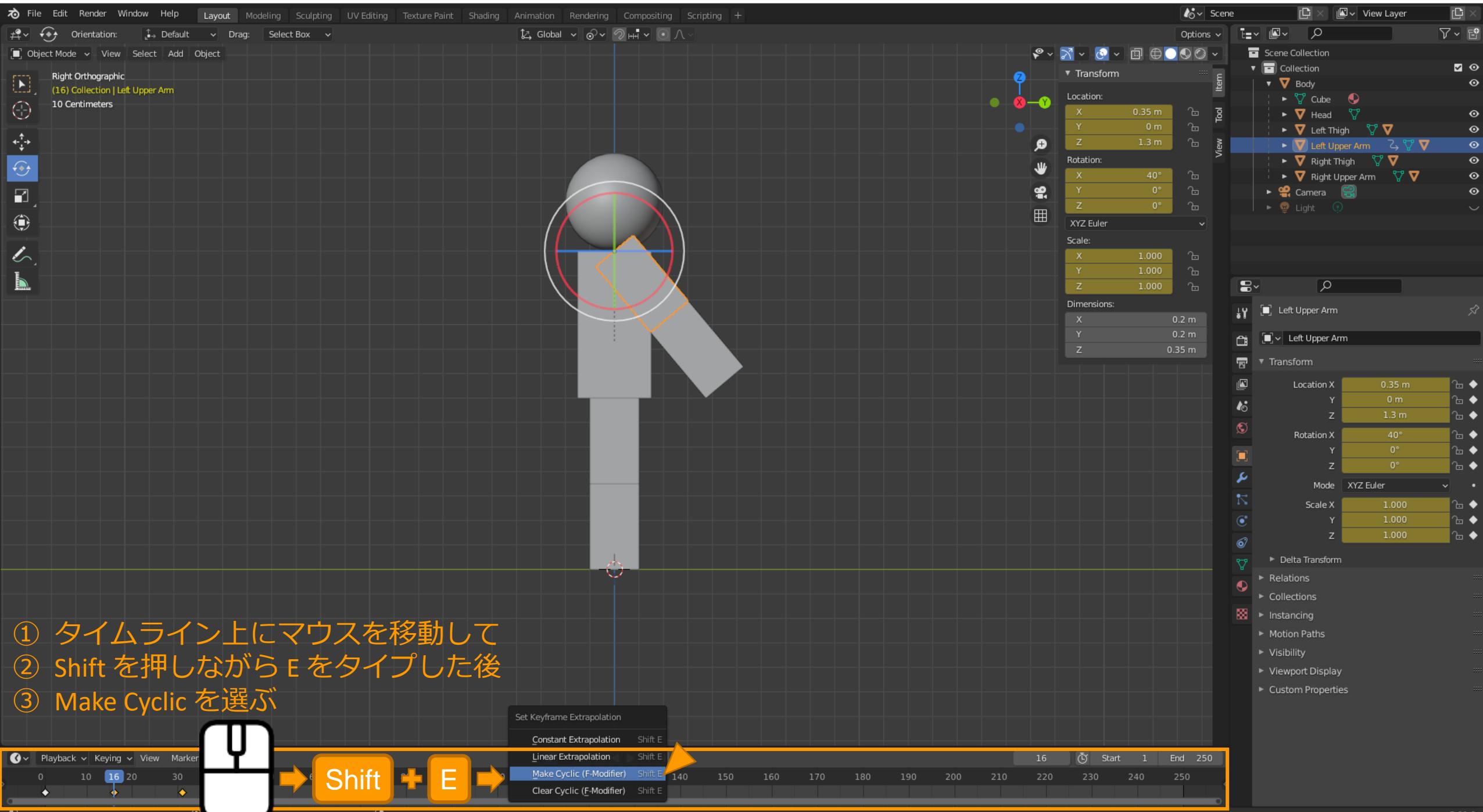
動かすと腕を振る (または Space でアニメーションのプレビュー)

Playback Keying View Marker

0 10 15 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

16 Start 1 End 250

2.91.0



Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic (88) Collection | Left Upper Arm 10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	-31.7°
Y	0°
Z	0°
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

XYZ Euler

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

View Layer

Item Tool View

Left Upper Arm

Transform

Location X	0.35 m
Y	0 m
Z	1.3 m

Rotation X	-31.7°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

繰り返し腕を振り続ける
(または Space でアニメーションのプレビュー)

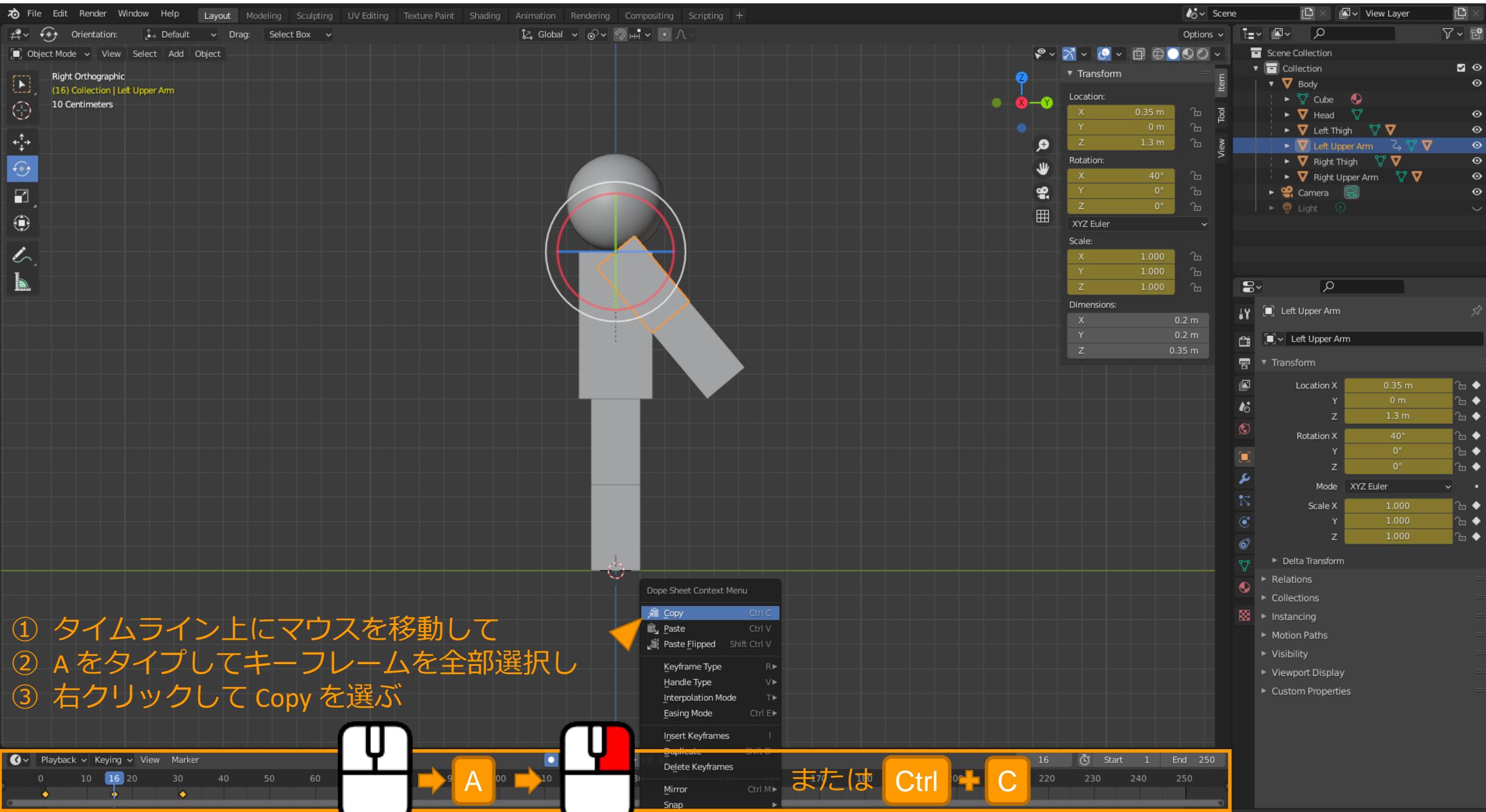
Playback Keying View Marker

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Object Context Menu

2.91.0



Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Thigh
10 Centimeters

Transform

- Location:

X	-0.15 m
Y	0 m
Z	0.7 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

右腿

Right Thigh

Transform

Location X	-0.15 m
Y	0 m
Z	0.7 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	-1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

1 フレーム目に戻す

Playback Keying View Marker

Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Right Thigh 10 Centimeters

Scene Collection Collection Body Cube Head Left Thigh Left Upper Arm Right Thigh Right Upper Arm Camera Light

Transform Location X: -0.15 m Y: 0 m Z: 0.7 m Rotation X: 0° Y: 0° Z: 0° Scale X: -1.000 Y: 1.000 Z: 1.000 Dimensions X: 0.2 m Y: 0.2 m Z: 0.35 m XYZ Euler

Insert Keyframe Menu

- Location
- Rotation**
- Scale
- Location & Rotation
- Location, Rotation & Scale
- Location & Scale
- Rotation & Scale
- Delta Location
- Delta Rotation
- Delta Scale
- Visual Location
- Visual Rotation
- Visual Scale
- Visual Location & Rotation
- Visual Location, Rotation & Scale
- Visual Location & Scale
- Visual Rotation & Scale

Right Thigh

Transform

- Location X: -0.15 m Y: 0 m Z: 0.7 m
- Rotation X: 0° Y: 0° Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000 Y: 1.000 Z: 1.000

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

Scene View Layer

Item Tool View

Right Thigh

Transform

- Location X: -0.15 m Y: 0 m Z: 0.7 m
- Rotation X: 0° Y: 0° Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000 Y: 1.000 Z: 1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

回転のチャネルだけのキーフレームを作る

Orientation: Default Drag: Select Box

Global Options

Object Mode View Select Add Object

Right Orthographic (1) Collection | Right Thigh 10 Centimeters

Transform

- Location: X -0.15 m, Y 0 m, Z 0.7 m
- Rotation: X 0°, Y 0°, Z 0°
- Scale: X -1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

XYZ Euler

View Item Tool

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

Right Thigh

Transform

- Location X -0.15 m, Y 0 m, Z 0.7 m
- Rotation X 0°, Y 0°, Z 0°
- Mode XYZ Euler
- Scale X -1.000, Y 1.000, Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Dope Sheet Context Menu

- Copy Ctrl C
- Paste Ctrl V (highlighted)
- Paste Flipped Shift Ctrl V
- Keyframe Type R
- Handle Type V
- Interpolation Mode T
- Easing Mode Ctrl E
- Insert Keyframes I
- Duplicate Shift D
- Delete Keyframes
- Mirror Ctrl M
- Snap

Playback Keying View Marker

1 10 20 30

1 100 200 300 400 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

1 100 200 300 400 150 160 170 180 190 200 210 220 230 240 250

または **Ctrl + V**

タイムライン上にマウスを移動して右クリックして Paste を選ぶ

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Thigh
10 Centimeters

Transform

- Location: X -0.15 m, Y 0 m, Z 0.7 m
- Rotation: X -40°, Y 0°, Z 0°
- Scale: X -1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

XYZ Euler

View

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

Search: Right Thigh

Transform

- Location X -0.15 m, Y 0 m, Z 0.7 m
- Rotation X -40°, Y 0°, Z 0°
- Mode XYZ Euler
- Scale X -1.000, Y 1.000, Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

左腕と同時に右足が動く

① タイムライン上にマウスを移動して
 ② Shift を押しながら E をタイプした後
 ③ Make Cyclic を選ぶ

Set Keyframe Extrapolation

Constant Extrapolation Shift E
 Linear Extrapolation Shift E
Make Cyclic (F-Modifier) Shift E
 Clear Cyclic (F-Modifier) Shift E

Playback Keying View Marker

Shift + E

Start 1 End 250

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Upper Arm
10 Centimeters

Transform

- Location:

X	-0.35 m
Y	0 m
Z	1.3 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

右上腕

Right Upper Arm

Transform

Location X	-0.35 m
Y	0 m
Z	1.3 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	-1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

1 フレーム目に戻す

Playback Keying View Marker

Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Select Box Select Rotate View Object Context Menu

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Upper Arm
10 Centimeters

Transform

- Location: X -0.35 m, Y 0 m, Z 1.3 m
- Rotation: X 0°, Y 0°, Z 0°
- XYZ Euler
- Scale: X -1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

回転のチャネルだけのキーフレームを作る

Insert Keyframe Menu

- I → Rotation
- Location
- Scale
- Location & Rotation
- Location, Rotation & Scale
- Location & Scale
- Rotation & Scale
- Delta Location
- Delta Rotation
- Delta Scale
- Visual Location
- Visual Rotation
- Visual Scale
- Visual Location & Rotation
- Visual Location, Rotation & Scale
- Visual Location & Scale
- Visual Rotation & Scale

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

Right Upper Arm

Transform

- Location X: -0.35 m, Y: 0 m, Z: 1.3 m
- Rotation X: 0°, Y: 0°, Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000, Y: 1.000, Z: 1.000

Playback Keying View Marker

Marker

Start 1 End 250

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Right Orthographic
(1) Collection | Right Upper Arm
10 Centimeters

Orientation: Default Drag: Select Box

Global Options Item Tool View

Transform

Location:
X -0.35 m
Y 0 m
Z 1.3 m

Rotation:
X 0°
Y 0°
Z 0°

XYZ Euler

Scale:
X -1.000
Y 1.000
Z 1.000

Dimensions:
X 0.2 m
Y 0.2 m
Z 0.35 m

Scene Collection
Collection
Body
- Cube
- Head
- Left Thigh
- Left Upper Arm
- Right Thigh
- Right Upper Arm
Camera
Light

Right Upper Arm

Transform

Location X -0.35 m
Y 0 m
Z 1.3 m

Rotation X 0°
Y 0°
Z 0°

Mode XYZ Euler

Scale X -1.000
Y 1.000
Z 1.000

Delta Transform
Relations
Collections
Instancing
Motion Paths
Visibility
Viewport Display
Custom Properties

Dope Sheet Context Menu
Copy Ctrl C
Paste Ctrl V
Paste Flipped Shift Ctrl V
Keyframe Type R
Handle Type V
Interpolation Mode T
Easing Mode Ctrl E
Insert Keyframes I
Duplicate Shift D
Delete Keyframes
Mirror Ctrl M
Snap

Playback Keying View Marker

1 10 20 30 100 150 160 170 180 190 200 210 220 230 240 250 1 Start 1 End 250

1 100 150 160 170 180 190 200 210 220 230 240 250

または **Ctrl + V**

タイムライン上にマウスを移動して右クリックして Paste を選ぶ

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options View Item Tool View Layer

Object Mode View Select Add Object Right Orthographic (1) Collection | Right Upper Arm 10 Centimeters

Transform Location: X -0.35 m Y 0 m Z 1.3 m Rotation: X -40° Y 0° Z 0° XYZ Euler Scale: X -1.000 Y 1.000 Z 1.000 Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Scene Collection Collection Body Cube Head Left Thigh Left Upper Arm Right Thigh Right Upper Arm Camera Light

Right Upper Arm Right Upper Arm Transform Location X -0.35 m Y 0 m Z 1.3 m Rotation X -40° Y 0° Z 0° Mode XYZ Euler Scale X -1.000 Y 1.000 Z 1.000

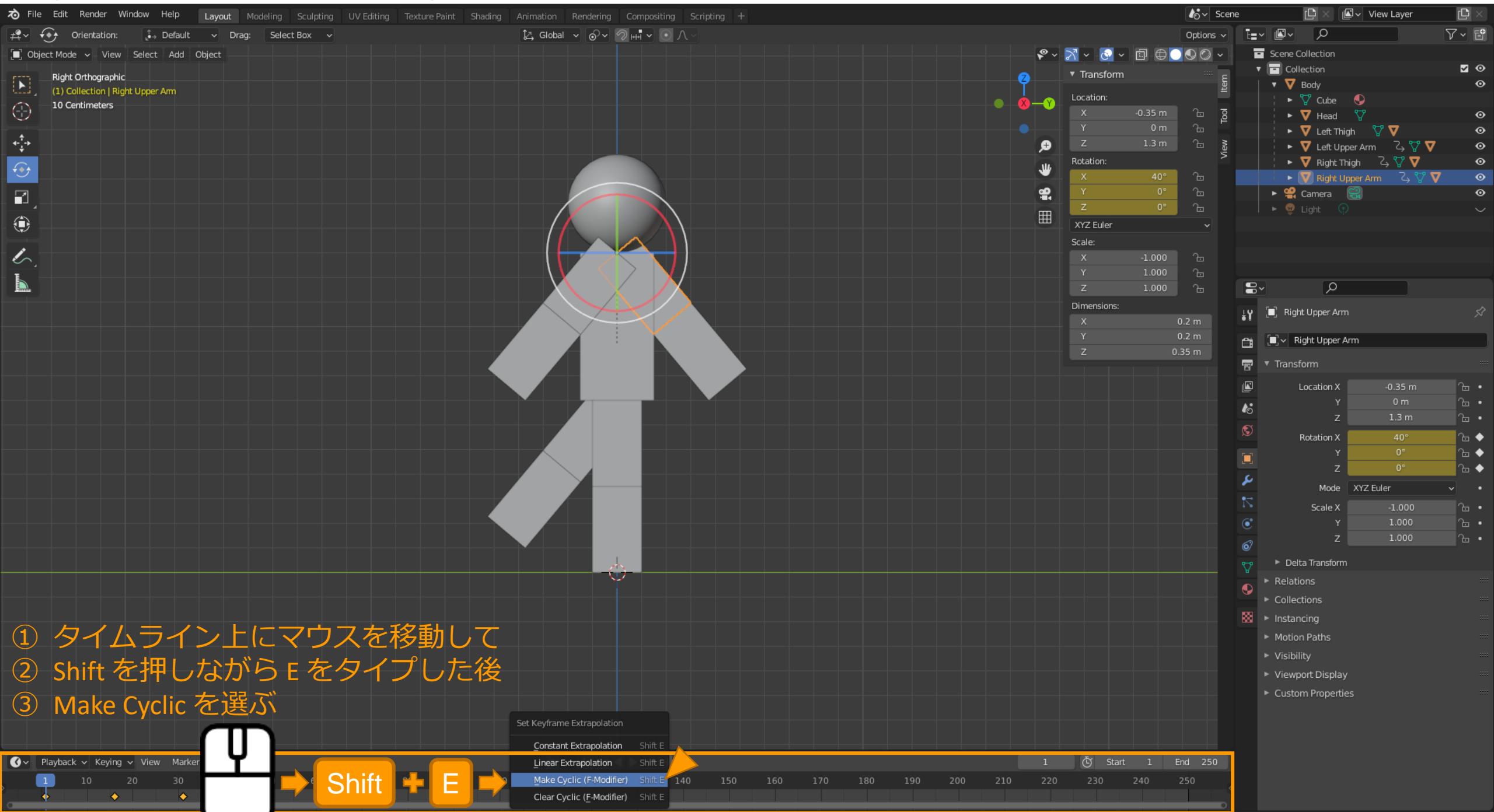
Dope Sheet Context Menu

- Copy Ctrl C
- Paste Ctrl V
- Paste Flipped Shift Ctrl V
- Keyframe Type R
- Handle Type V
- Interpolation Mode T
- Easing Mode Ctrl E
- Insert Keyframes I
- Duplicate Shift D
- Delete Keyframes Ctrl M
- Mirror Ctrl M
- Snap

Playback Keying View Mar 1 10 20 30 50 140 150 160 170 180 190 200 210 220 230 240 250 1 Start 1 End 250

By Times Over Current Frame Ctrl M By Values Over Value=0 Ctrl M By Times Over First Selected Marker Ctrl M

タイムライン上にマウスを移動して右クリックして Mirror から By Values Over Value=0 を選ぶ



右クリックして Copy を選ぶ

タイムライン上にマウスを移動して A をタイ
プし、すべてのキーフレームを選択した後に
右クリックして Copy を選ぶ

または **Ctrl + C**

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Left Thigh
10 Centimeters

Transform

- Location:

X	0.15 m
Y	0 m
Z	0.7 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

左腿

Left Thigh

Transform

Location X	0.15 m
Y	0 m
Z	0.7 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

1 フレーム目に戻す

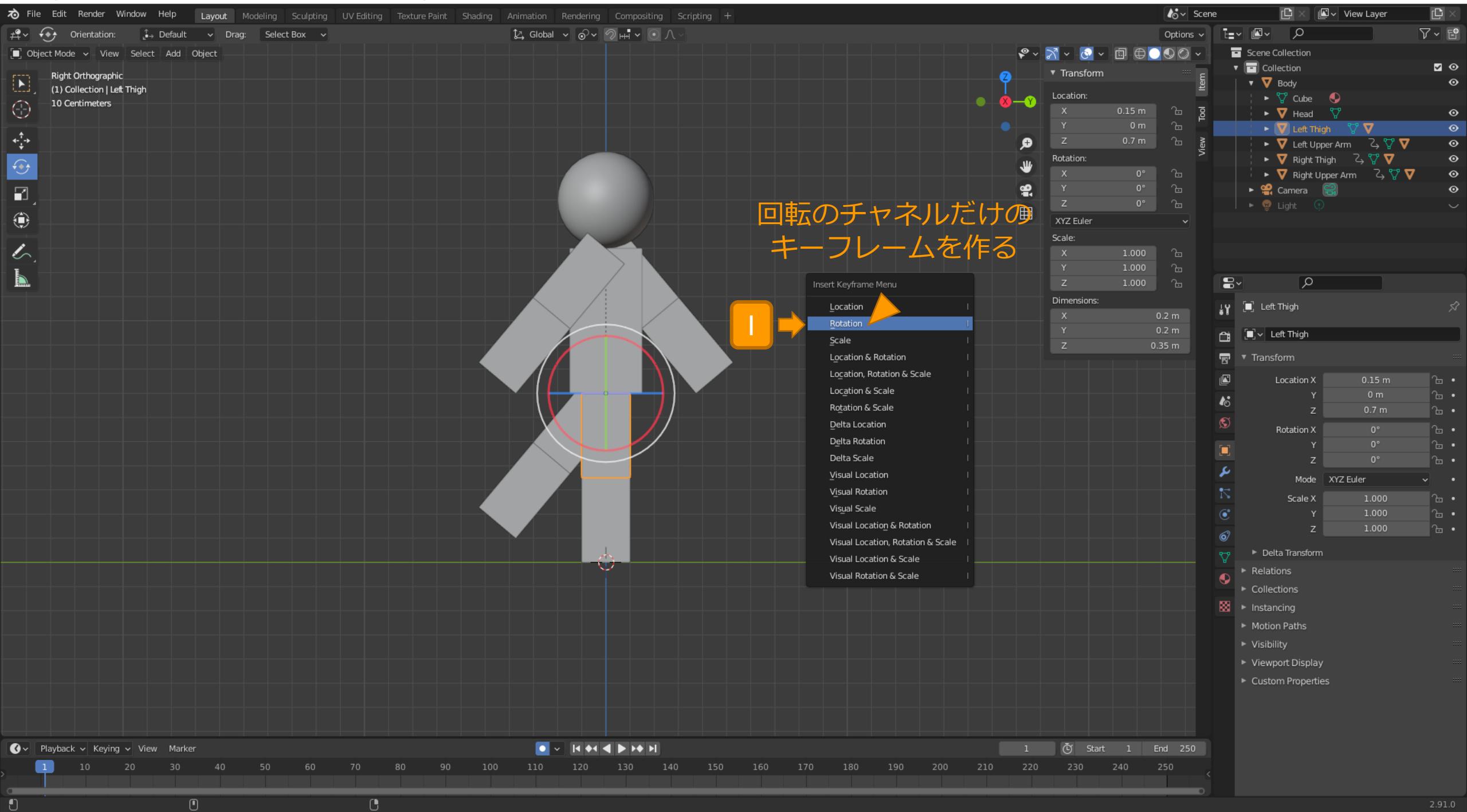
Playback Keying View Marker

Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Start 1 End 250

Select Box Select Rotate View Object Context Menu



Orientation: Default Drag: Select Box

Right Orthographic
(1) Collection | Left Thigh
10 Centimeters

Transform

- Location:

X	0.15 m
Y	0 m
Z	0.7 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

Left Thigh

Transform

Location X	0.15 m
Y	0 m
Z	0.7 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

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Visibility

Viewport Display

Custom Properties

Dope Sheet Context Menu

- Copy Ctrl C
- Paste Ctrl V
- Paste Flipped Shift Ctrl V
- Keyframe Type R
- Handle Type V
- Interpolation Mode T
- Easing Mode Ctrl E
- Insert Keyframes I
- Duplicate Shift D
- Delete Keyframes
- Mirror Ctrl M
- Snap

Playback ▾ Keying ▾ View ▾ Marker

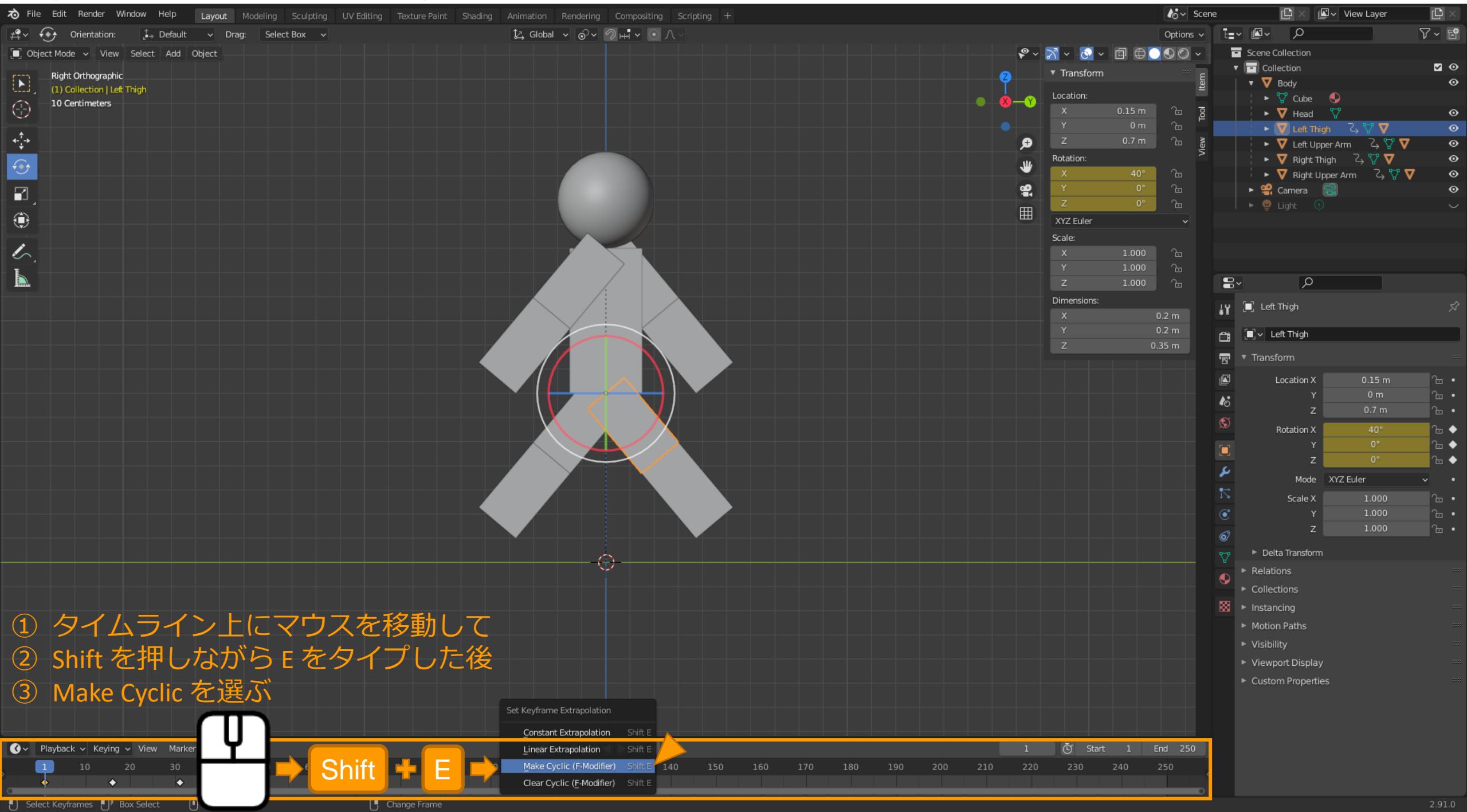
1 10 20 30

1 100 200 300 400 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

1 100 200 300 400 150 160 170 180 190 200 210 220 230 240 250

または **Ctrl + V**

タイムライン上にマウスを移動して右クリックして Paste を選ぶ



Blender 2.91.0

User Perspective
(1) Collection | Left Thigh

Orientation: Default Drag: Select Box

Global View Options

Object Mode View Select Add Object

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

Transform

Location:

X	0.15 m
Y	0 m
Z	0.7 m

Rotation:

X	40°
Y	0°
Z	0°

XYZ Euler

Scale:

X	1.000
Y	1.000
Z	1.000

Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Transform

Location X	0.15 m
Y	0 m
Z	0.7 m

Rotation X	40°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	1.000
Y	1.000
Z	1.000

Num Lock / * -

7 8 9 +

4 5 6

1 2 3 Enter

0 .

斜めから見ると
こんな感じ

(Space でアニメーションのプレビュー)

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic (1) Collection | Left Shin 10 Centimeters

Transform

- Location: X 0.15 m, Y 0 m, Z 0.35 m
- Rotation: X 0°, Y 0°, Z 0°
- XYZ Euler
- Scale: X 1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

左脛

Left Shin

Transform

- Location X 0.15 m, Y 0 m, Z 0.35 m
- Rotation X 0°, Y 0°, Z 0°
- Mode XYZ Euler
- Scale X 1.000, Y 1.000, Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

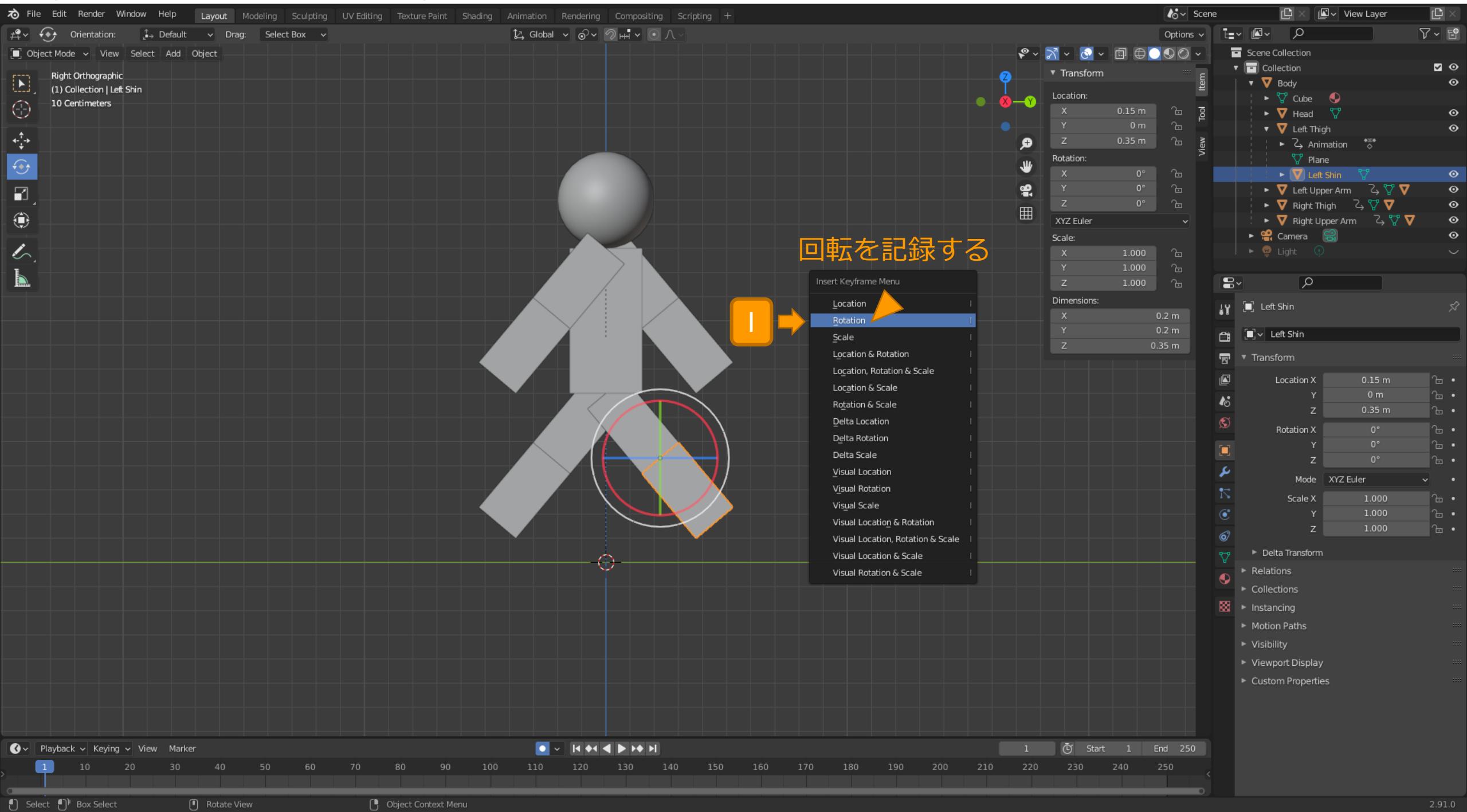
1 フレーム目に戻す

Playback Keying View Marker

Marker 1

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Pan View Set 3D Cursor Move



Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic (1) Collection | Left Shin 10 Centimeters

Transform

Location:
X 0.15 m
Y 0 m
Z 0.35 m

Rotation:
X 0°
Y 0°
Z 0°

XYZ Euler

Scale:
X 1.000
Y 1.000
Z 1.000

Dimensions:
X 0.2 m
Y 0.2 m
Z 0.35 m

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
- Camera
- Light

View Layer

Item

Tool

View

Left Shin

Transform

Location X 0.15 m
Y 0 m
Z 0.35 m

Rotation X 0°
Y 0°
Z 0°

Mode XYZ Euler

Scale X 1.000
Y 1.000
Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

Play

Shift + D

1 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

2.91.0

タイムライン上にマウスを移動して Shift を押しながら D をタイプ

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic (1) Collection | Left Shin 10 Centimeters

Transform

- Location: X 0.15 m, Y 0 m, Z 0.35 m
- Rotation: X 0°, Y 0°, Z 0°
- XYZ Euler
- Scale: X 1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

View

Tool

Item

Left Shin

Transform

- Location X 0.15 m, Y 0 m, Z 0.35 m
- Rotation X 0°, Y 0°, Z 0°
- Mode XYZ Euler
- Scale X 1.000, Y 1.000, Z 1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

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Custom Properties

Playback Keying View Mark

1 10 20 30

31 フレーム目あたりに複写して Enter または

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (12) Collection | Left Shin 10 Centimeters

Transform

- Location:

X	0.15 m
Y	0 m
Z	0.35 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Item Tool View

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Camera
 - Light

Search

Left Shin

Transform

Location X	0.15 m
Y	0 m
Z	0.35 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

12 フレーム目くらいに移動する

Playback Keying View Marker

0 12 200 250

Select Box Select Rotate View Object Context Menu

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (12) Collection | Left Shin 10 Centimeters

Transform Location: X 0.15 m Y 0 m Z 0.35 m Rotation: X 40° Y 0° Z 0° XYZ Euler Scale: X 1.000 Y 1.000 Z 1.000 Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Scene Collection Collection Body Cube Head Left Thigh Animation Plane Left Shin Left Upper Arm Right Thigh Right Upper Arm Camera Light

Left Shin

Transform Location X 0.15 m Y 0 m Z 0.35 m Rotation X 40° Y 0° Z 0° Mode XYZ Euler Scale X 1.000 Y 1.000 Z 1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

Playback Keying View Marker 0 1 12 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (12) Collection | Left Shin 10 Centimeters

Transform Location: X 0.15 m Y 0 m Z 0.35 m Rotation: X 40° Y 0° Z 0° XYZ Euler Scale: X 1.000 Y 1.000 Z 1.000 Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Scene Collection Collection Body Cube Head Left Thigh Animation Plane Left Shin Left Upper Arm Right Thigh Right Upper Arm Camera Light

Left Shin

Transform Location X 0.15 m Y 0 m Z 0.35 m Rotation X 40° Y 0° Z 0° Mode XYZ Euler Scale X 1.000 Y 1.000 Z 1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

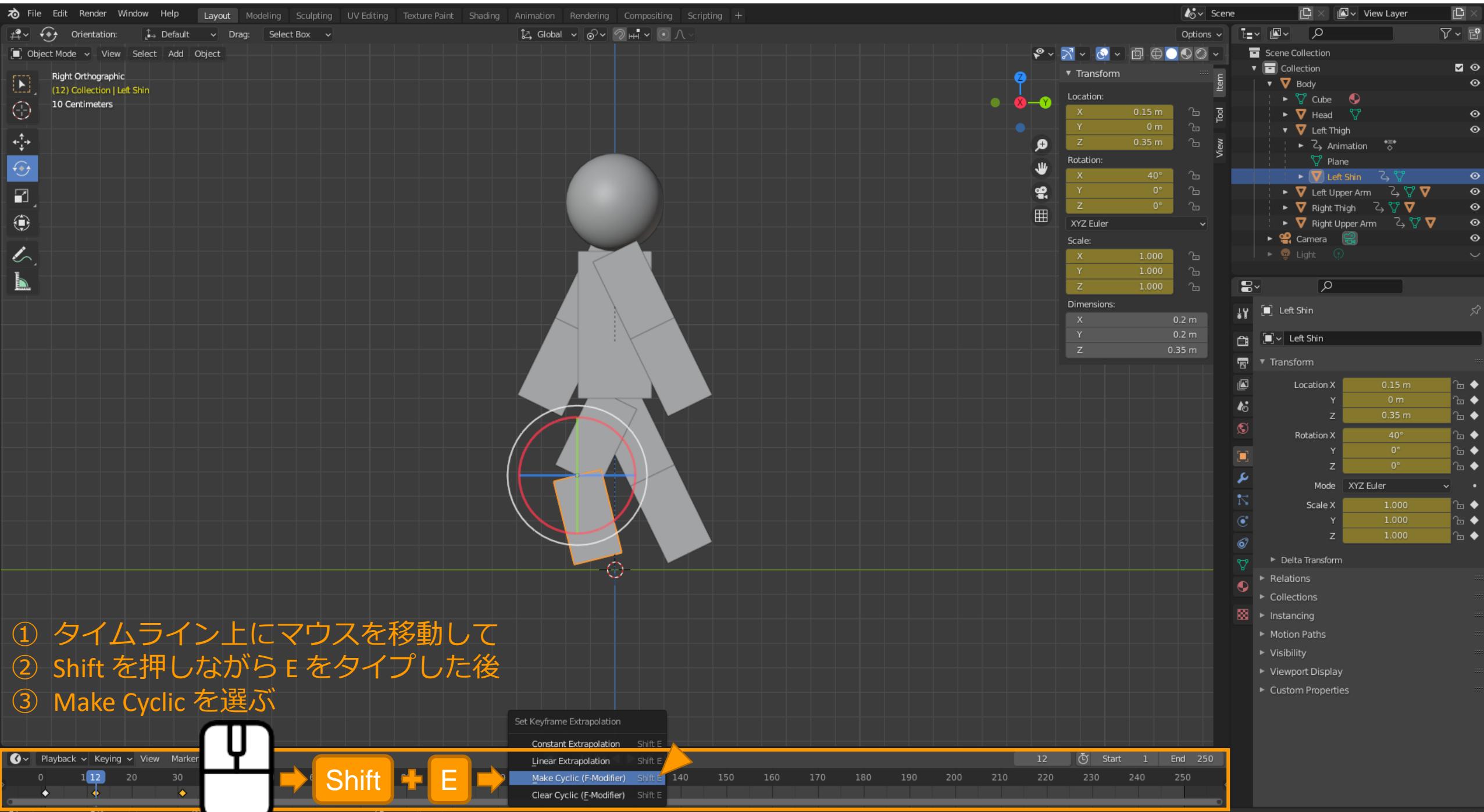
Playback Keying View Marker 0 1 12 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

変位は 40° くらい

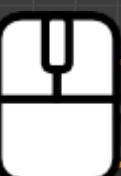
X 軸中心に回転する

脛だけ動く

ここも 40° くらいになる



- ① タイムライン上にマウスを移動して
- ② Shift を押しながら E をタイプした後
- ③ Make Cyclic を選ぶ



Shift

+ E

Set Keyframe Extrapolation

Constant Extrapolation Shift E

Linear Extrapolation Shift E

Make Cyclic (F-Modifier) Shift E

Clear Cyclic (F-Modifier) Shift E

12 Start 1 End 250



Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Shin
10 Centimeters

Transform

- Location: X: -0.15 m, Y: 0 m, Z: 0.35 m
- Rotation: X: 0°, Y: 0°, Z: 0°
- XYZ Euler
- Scale: X: -1.000, Y: 1.000, Z: 1.000
- Dimensions: X: 0.2 m, Y: 0.2 m, Z: 0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Animation Plane
 - Right Shin
 - Right Upper Arm

右脛

Right Shin

Transform

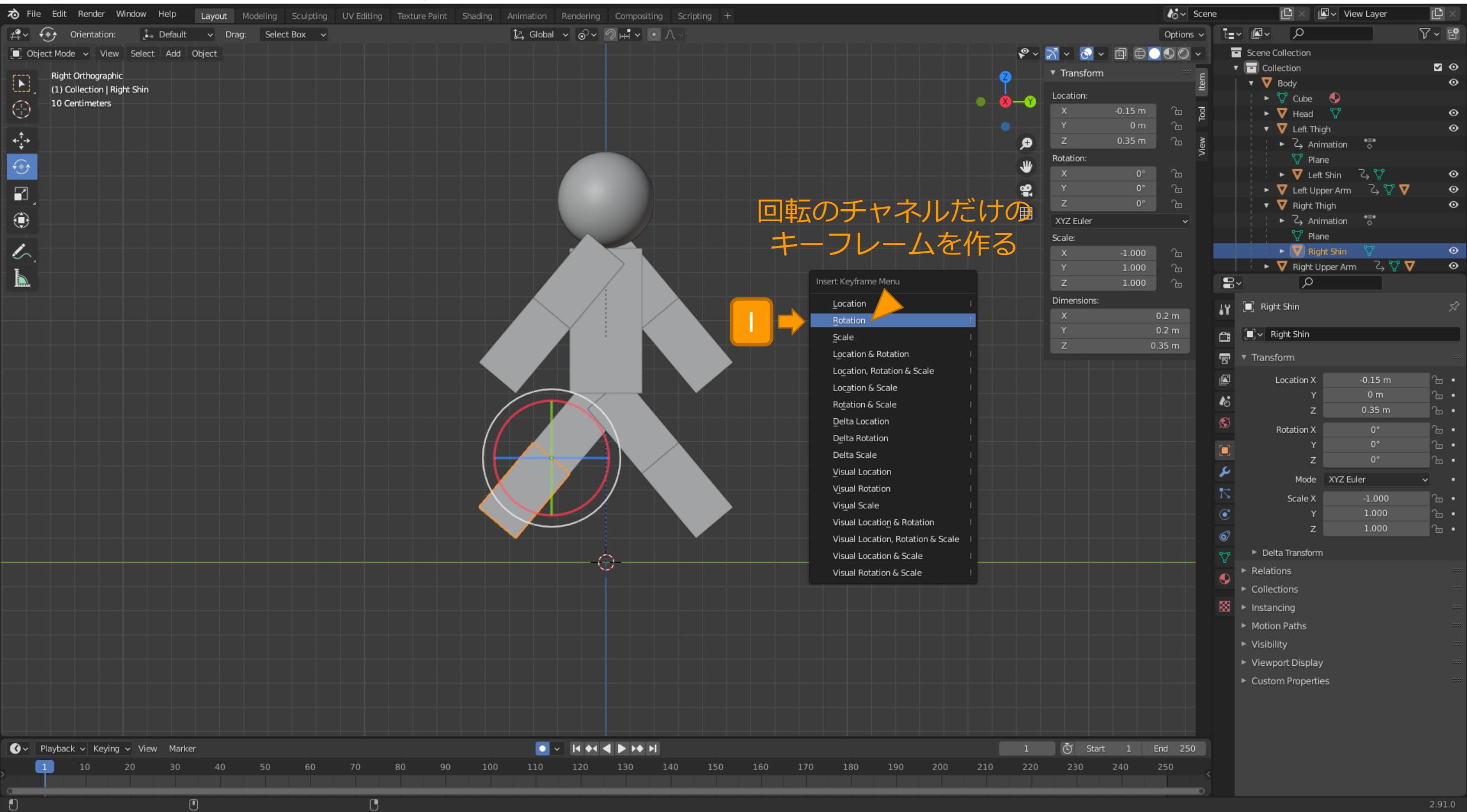
- Location X: -0.15 m, Y: 0 m, Z: 0.35 m
- Rotation X: 0°, Y: 0°, Z: 0°
- Mode: XYZ Euler
- Scale X: -1.000, Y: 1.000, Z: 1.000

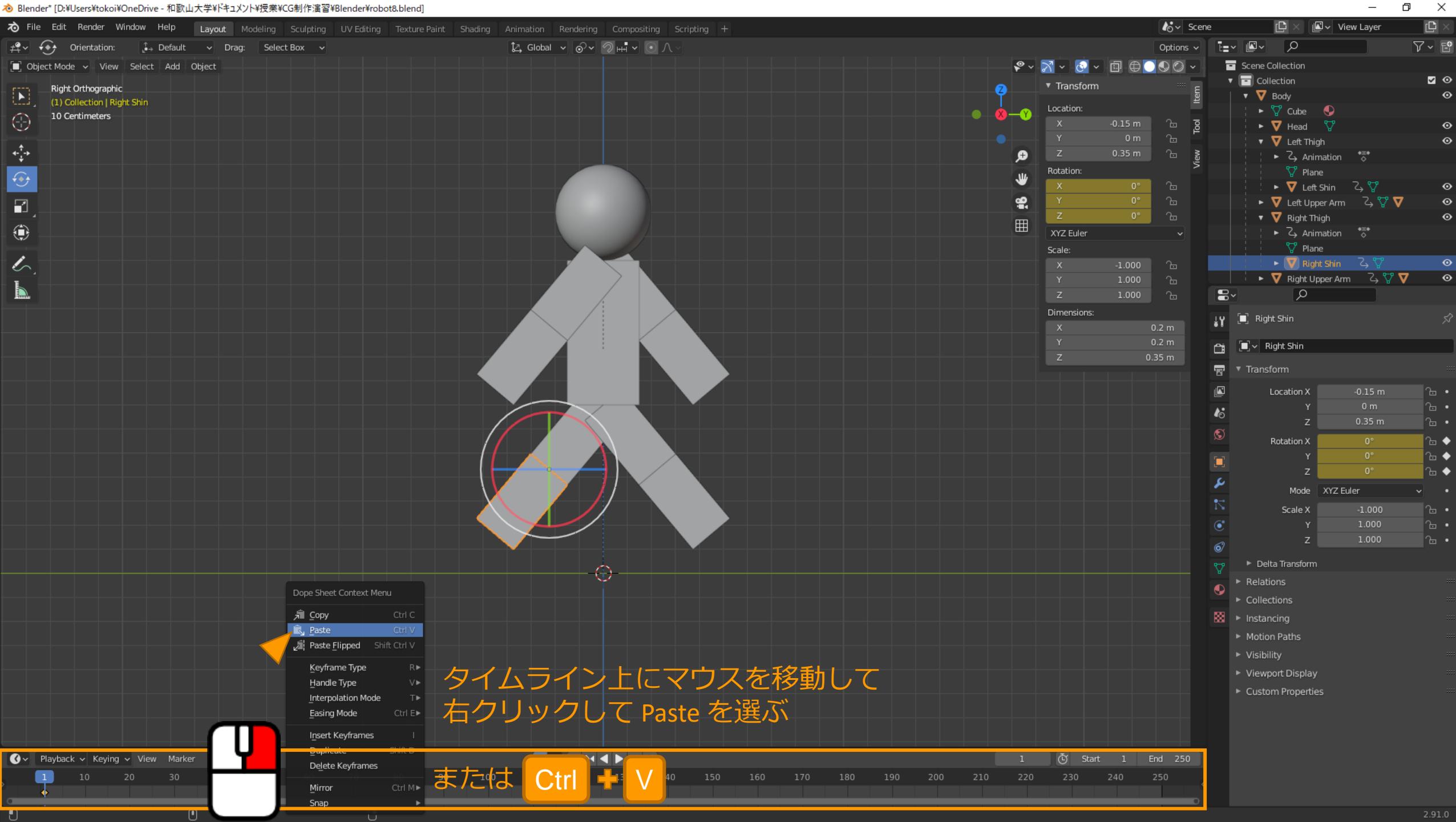
1 フレーム目に戻す

Playback Keying View Marker

Marker 1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Select Box Select Rotate View Object Context Menu





Right Orthographic
(1) Collection | Right Shin
10 Centimeters

Orientation: Default Drag: Select Box

Global Options View Item Tool View

Transform

Location:

- X -0.15 m
- Y 0 m
- Z 0.35 m

Rotation:

- X 0°
- Y 0°
- Z 0°

XYZ Euler

Scale:

- X -1.000
- Y 1.000
- Z 1.000

Dimensions:

- X 0.2 m
- Y 0.2 m
- Z 0.35 m

Right Shin

Right Shin

Transform

- Location X -0.15 m
- Y 0 m
- Z 0.35 m

- Rotation X 0°
- Y 0°
- Z 0°

Mode XYZ Euler

- Scale X -1.000
- Y 1.000
- Z 1.000

Delta Transform

Relations

Collections

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Motion Paths

Visibility

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Playback Keying View Marker

1 10 20 30 40 50 60 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

E

Select Keyframes Box Select Pan View

Scene View Layer

Scene Collection

Collection

- Body
- Head
- Left Thigh
- Left Shin
- Left Upper Arm
- Right Thigh
- Right Shin
- Right Upper Arm

Plane

XYZ Euler

Start 1 End 250

2.91.0

タイムライン上にマウスを移動して E をタイプ

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (1) Collection | Right Shin 10 Centimeters

Transform

- Location:

X	-0.15 m
Y	0 m
Z	0.35 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Item Tool View

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Animation Plane
 - Right Shin
 - Right Upper Arm

Right Shin

Right Shin

Transform

Location X	-0.15 m
Y	0 m
Z	0.35 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	-1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

Motion Paths

Visibility

Viewport Display

Custom Properties

DeltaX: 15.00 (14.7653)

1 10 20 30 40 50 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Confirm Cancel Xaxis Yaxis Ctrl Snap Invert G Move R Rotate S Resize Automatic Constraint Automatic Constraint Plane

2.91.0

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Right Shin
10 Centimeters

Transform

- Location:

X	-0.15 m
Y	0 m
Z	0.35 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Animation Plane
 - Right Shin
 - Right Upper Arm

View

Tool

Item

Right Shin

Right Shin

Transform

Location X	-0.15 m
Y	0 m
Z	0.35 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	-1.000
Y	1.000
Z	1.000

Delta Transform

Relations

Collections

Instancing

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Visibility

Viewport Display

Custom Properties

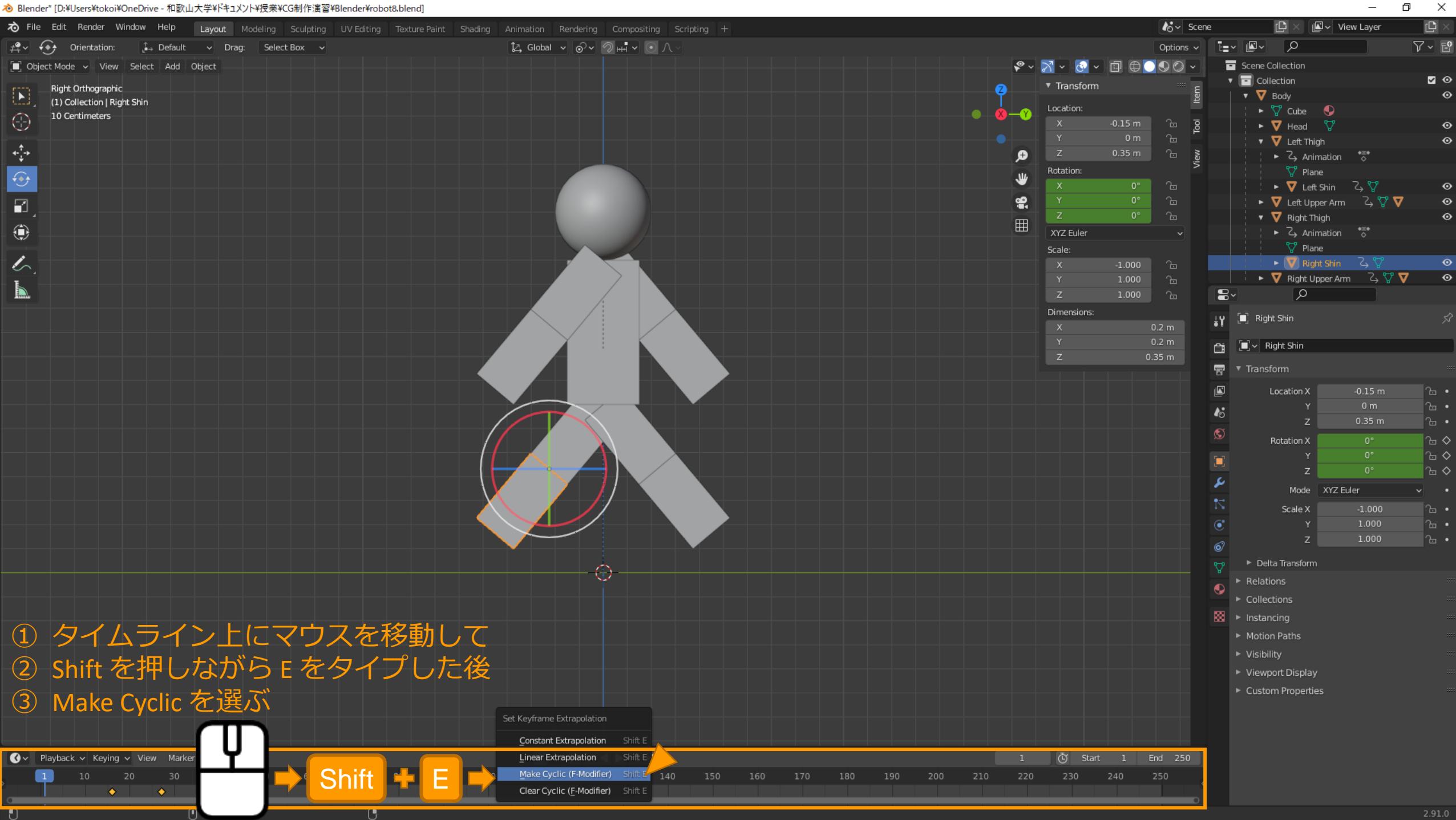
Playback Keying View Marker

Enter または

1 10 20 30 40 50 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Pan View Set 3D Cursor Move



- ① タイムライン上にマウスを移動して
 - ② Shift を押しながら E をタイプした後
 - ③ Make Cyclic を選ぶ

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Left Lower Arm
10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Animation
 - Plane.002
 - Left Lower Arm
 - Right Thigh
 - Animation

Left Lower Arm

Transform

- Location X: 0.35 m
- Location Y: 0 m
- Location Z: 0.95 m
- Rotation X: 0°
- Rotation Y: 0°
- Rotation Z: 0°
- Mode: XYZ Euler
- Scale X: 1.000
- Scale Y: 1.000
- Scale Z: 1.000

1 フレーム目に戻す

Playback Keying View Marker

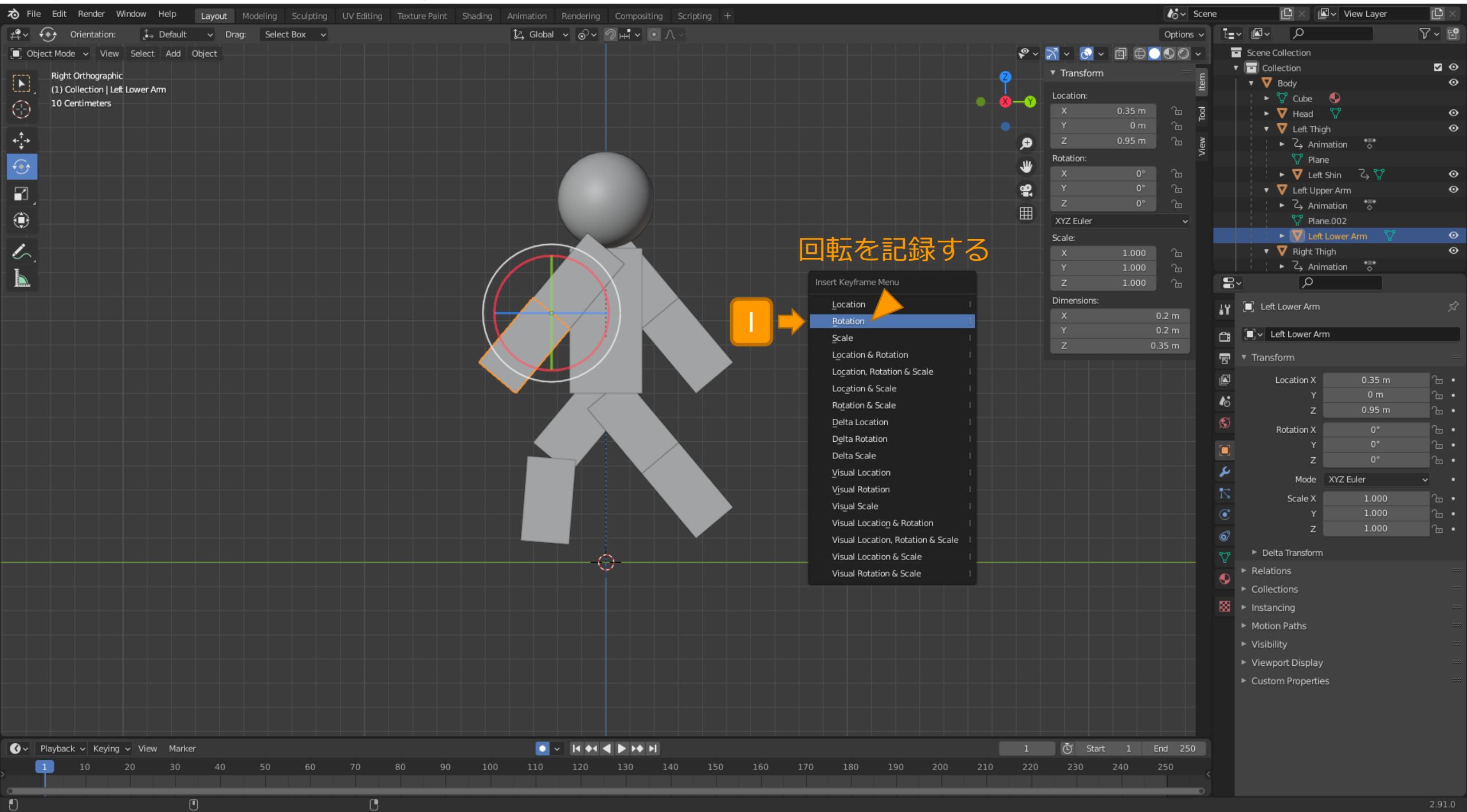
Marker 1

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

Scene View Layer

Item Tool View

左前腕



Right Orthographic
(1) Collection | Left Lower Arm
10 Centimeters

Orientation: Default Drag: Select Box

Global Options View Layer

Transform

- Location:

X	0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Animation
 - Plane.002
 - Left Lower Arm
 - Right Thigh
 - Animation

Item Tool View

Left Lower Arm

Transform

Location X	0.35 m
Y	0 m
Z	0.95 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

Play View M 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 1 Start 1 End 250

Shift + D

Select Key Pan View Dope Sheet Context Menu

2.91.0

タイムライン上にマウスを移動して Shift を押しながら D をタイプ

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(1) Collection | Left Lower Arm
10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Animation
 - Plane.002
 - Left Lower Arm
 - Right Thigh
 - Animation

Item Tool View

Left Lower Arm

Transform

Location X	0.35 m
Y	0 m
Z	0.95 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

Playback Keying View Mark

1 10 20 30

31 フレーム目あたりに複写して Enter または

1 10 20 30 210 220 230 240 250 Start 1 End 250

Select Box Select Object Context Menu

Blender 2.91.0

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(16) Collection | Left Lower Arm
10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Animation
 - Plane.002
 - Left Lower Arm
 - Right Thigh
 - Animation

Item Tool View

Left Lower Arm

Transform

Location X	0.35 m
Y	0 m
Z	0.95 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	1.000
Y	1.000
Z	1.000

Delta Transform Relations Collections Instancing Motion Paths Visibility Viewport Display Custom Properties

16 フレームくらいに移動する

Playback Keying View Marker

0 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options View Item Tool View Layer

Object Mode View Select Add Object Right Orthographic (16) Collection | Left Lower Arm 10 Centimeters

Transform

- Location:

X	0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	-40°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Animation
 - Plane
 - Left Shin
 - Left Upper Arm
 - Animation
 - Plane.002
 - Left Lower Arm
 - Right Thigh
 - Animation

Left Lower Arm

Transform

- Location X: 0.35 m
- Location Y: 0 m
- Location Z: 0.95 m
- Rotation X: -40°
- Rotation Y: 0°
- Rotation Z: 0°
- Mode: XYZ Euler
- Scale X: 1.000
- Scale Y: 1.000
- Scale Z: 1.000

Delta Transform

Relations

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Rotate

- Angle: -40°
- Axis: X
- Orientation: Global
- Proportional Editing

Playback Keying View Marker

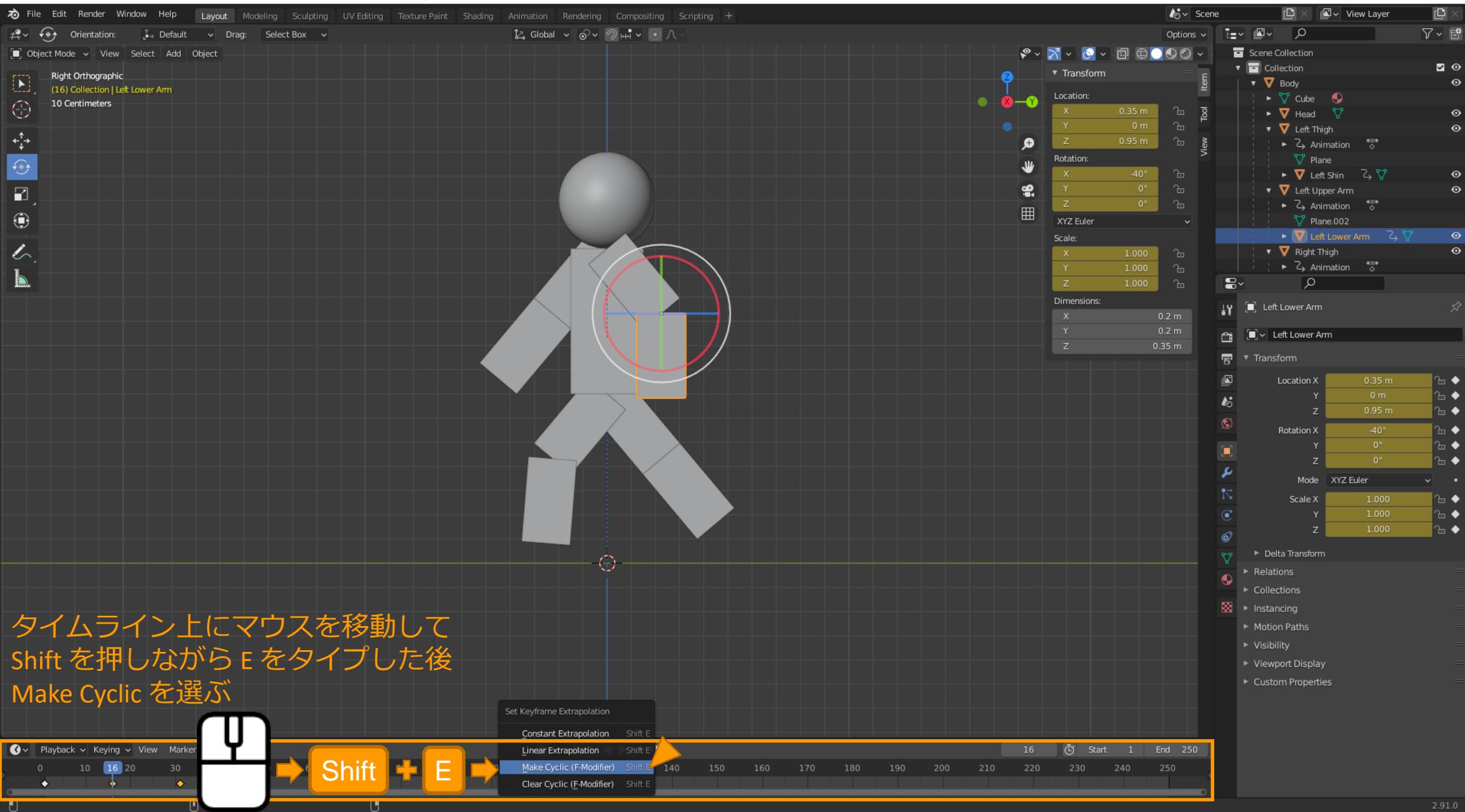
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

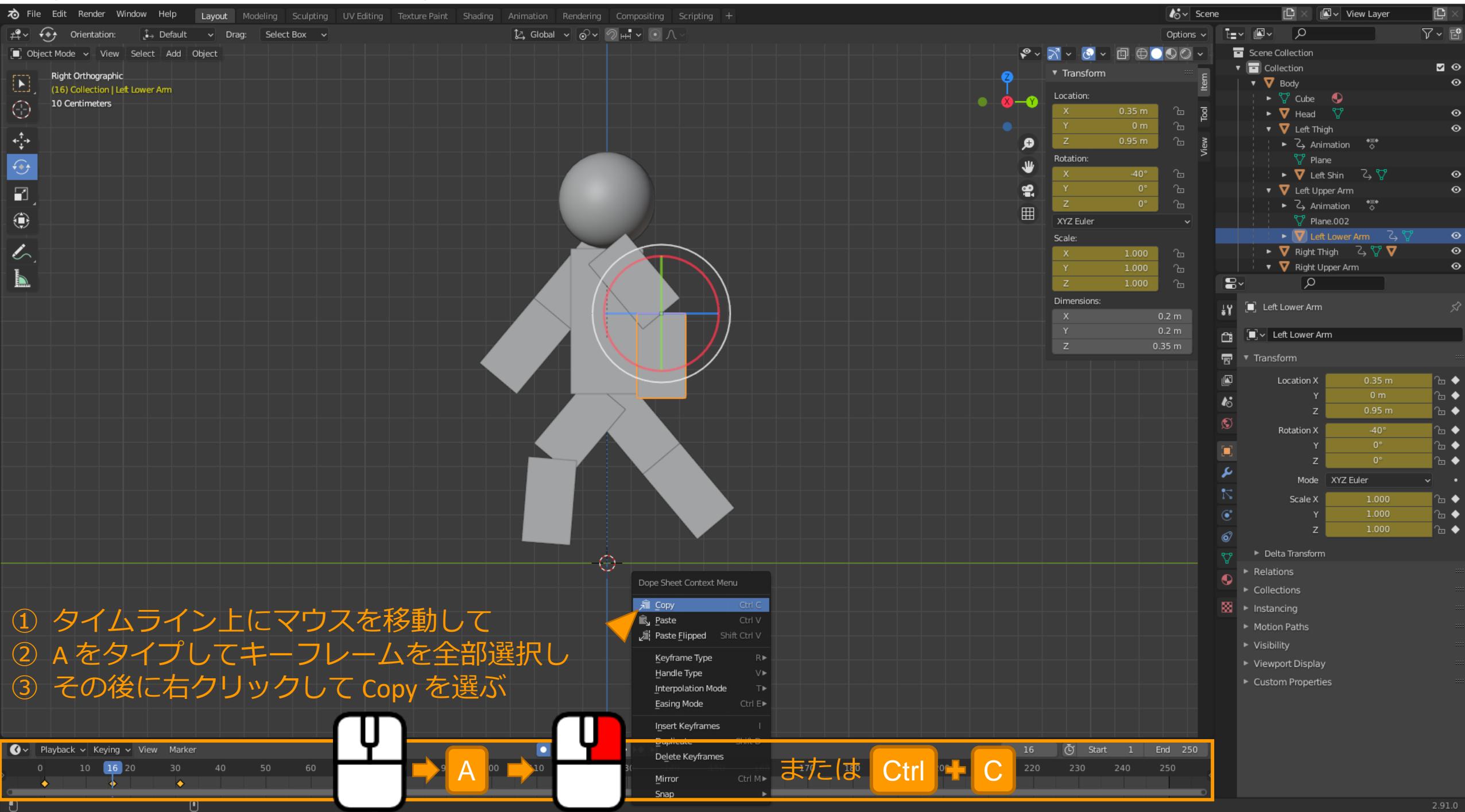
16 Start 1 End 250

2.91.0

変位は -40° くらい

ここも -40° くらいになる





Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Right Orthographic
(16) Collection | Right Lower Arm
10 Centimeters

Transform

- Location:

X	-0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Animation
 - Plane.002
 - Right Lower Arm
 - Camera
 - Light

右前腕

Right Lower Arm

Transform

Location X	-0.35 m
Y	0 m
Z	0.95 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	-1.000
Y	1.000
Z	1.000

Delta Transform

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16 フレームくらいに移動する

Playback Keying View Marker

Marker

16

Start 1 End 250

0 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Select Box Select Rotate View Object Context Menu

2.91.0

Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options View Item Tool View Layer

Object Mode View Select Add Object Right Orthographic (16) Collection | Right Lower Arm 10 Centimeters

Scene Collection Collection Body Cube Head Left Thigh Left Upper Arm Right Thigh Right Upper Arm Animation Plane.002 Right Lower Arm Camera Light

Transform Location: X -0.35 m Y 0 m Z 0.95 m Rotation: X 0° Y 0° Z 0° XYZ Euler Scale: X -1.000 Y 1.000 Z 1.000 Dimensions: X 0.2 m Y 0.2 m Z 0.35 m

Insert Keyframe Menu

- I Location
- Rotation**
- Scale
- Location & Rotation
- Location, Rotation & Scale
- Location & Scale
- Rotation & Scale
- Delta Location
- Delta Rotation
- Delta Scale
- Visual Location
- Visual Rotation
- Visual Scale
- Visual Location & Rotation
- Visual Location, Rotation & Scale
- Visual Location & Scale
- Visual Rotation & Scale

Playback Keying View Marker 0 10 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 Start 1 End 250

0 10 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

Select Box Select Pan View Set 3D Cursor Move

Orientation: Default Drag: Select Box

Global Options View Item Tool View

Object Mode View Select Add Object

Right Orthographic (16) Collection | Right Lower Arm 10 Centimeters

Transform

- Location: X -0.35 m, Y 0 m, Z 0.95 m
- Rotation: X 0°, Y 0°, Z 0°
- XYZ Euler
- Scale: X -1.000, Y 1.000, Z 1.000
- Dimensions: X 0.2 m, Y 0.2 m, Z 0.35 m

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Animation
 - Plane.002
 - Right Lower Arm
 - Camera
 - Light

Right Lower Arm

Transform

- Location X -0.35 m, Y 0 m, Z 0.95 m
- Rotation X 0°, Y 0°, Z 0°
- Mode XYZ Euler
- Scale X -1.000, Y 1.000, Z 1.000

Dope Sheet Context Menu

- Copy Ctrl C
- Paste Ctrl V (highlighted)
- Paste Flipped Shift Ctrl V
- Keyframe Type R
- Handle Type V
- Interpolation Mode T
- Easing Mode Ctrl E
- Insert Keyframes I
- Duplicate Shift D
- Delete Keyframes
- Mirror Ctrl M
- Snap

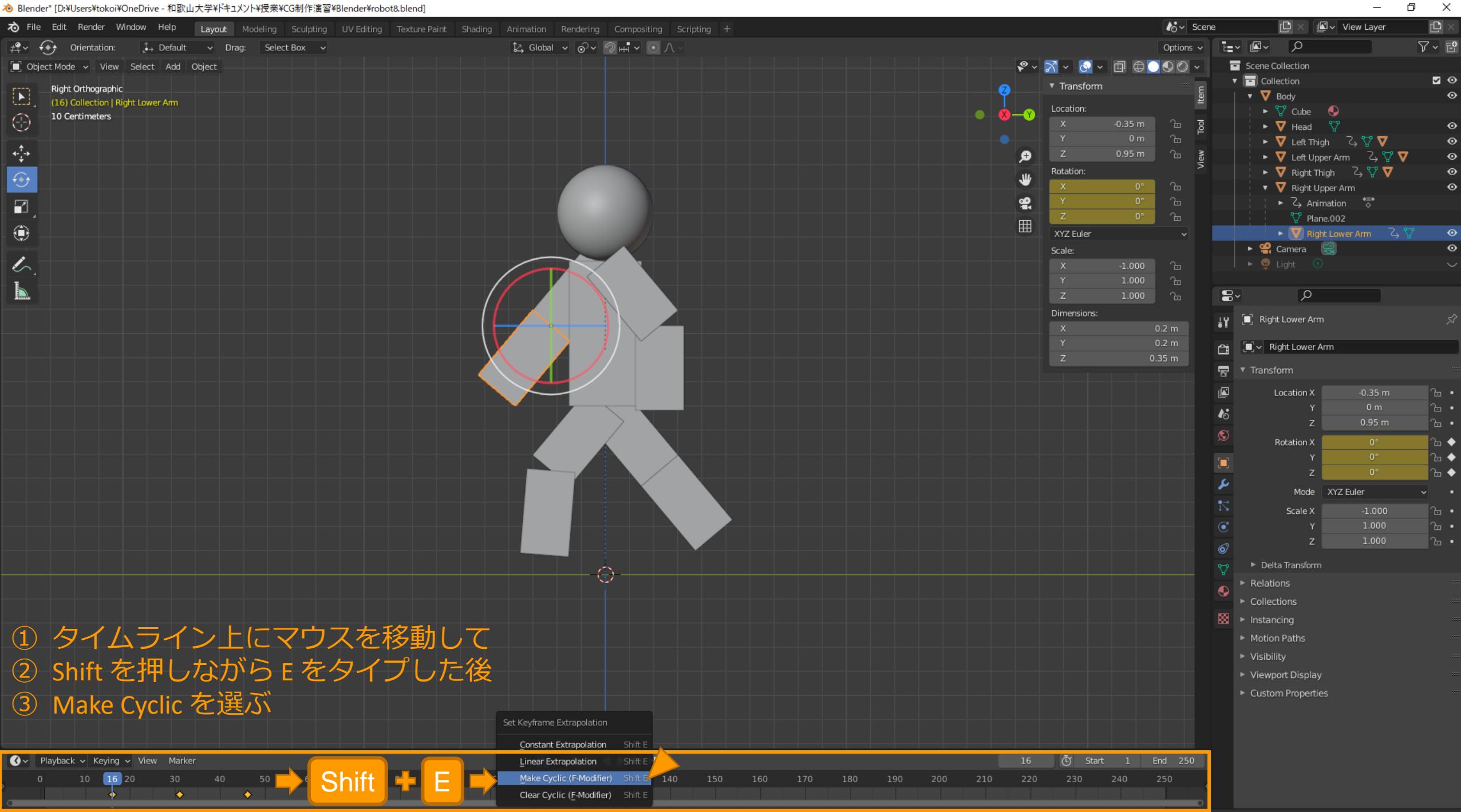
Playback Keying View Marker

16 Start 1 End 250

100 0 10 20 30 40 150 160 170 180 190 200 210 220 230 240 250

または **Ctrl + V**

タイムライン上にマウスを移動して右クリックして Paste を選ぶ



歩かせる

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object Right Orthographic (16) Collection | Right Shin 10 Centimeters

Transform

- Location:

X	-0.15 m
Y	0 m
Z	0.35 m
- Rotation:

X	0°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

Right Shin

Right Shin

Transform

Location X	-0.15 m
Y	0 m
Z	0.35 m

Rotation X	0°
Y	0°
Z	0°

Mode	XYZ Euler
Scale X	-1.000
Y	1.000
Z	1.000

Num Lock / * -

7 8 9 +

4 5 6

1 2 3 Enter

0 .

Scene Collection

Collection

- Body
 - Cube
 - Head
 - Left Thigh
 - Animation Plane
 - Left Shin
 - Left Upper Arm
 - Right Thigh
 - Animation Plane
- Right Shin
- Right Upper Arm

Right Shin

Right Shin

Transform

Location X: -0.15 m
Y: 0 m
Z: 0.35 m

Rotation X: 0°
Y: 0°
Z: 0°

Mode: XYZ Euler
Scale X: -1.000
Y: 1.000
Z: 1.000

Delta Transform
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Playback Keying View Marker

0 10 16 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

16 Start 1 End 250

Select Box Select Rotate View Object Context Menu

2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box Global Options

Object Mode View Select Add Object

Top Orthographic (1) Collection | Right Lower Arm 10 Centimeters

Transform

- Location:

X	-0.35 m
Y	0 m
Z	0.95 m
- Rotation:

X	-40°
Y	0°
Z	0°
- XYZ Euler
- Scale:

X	-1.000
Y	1.000
Z	1.000
- Dimensions:

X	0.2 m
Y	0.2 m
Z	0.35 m

View Item Tool

Scene Collection

- Collection
 - Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Animation
 - Plane.002
 - Right Lower Arm
 - Camera
 - Light

Right Lower Arm

Transform

Location X	-0.35 m
Y	0 m
Z	0.95 m

Rotation X	-40°
Y	0°
Z	0°

Mode	XYZ Euler
------	-----------

Scale X	-1.000
Y	1.000
Z	1.000

Num Lock / * -

7 8 9 +

4 5 6

1 2 3 Enter

0 .

Playback Keying View Marker

1 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

1 Start 1 End 250

Select Box Select Rotate View Object Context Menu

2.91.0

Blender 2.91.0

Scene Viewport (Top Orthographic View)

Move Tool (Orange Arrow)

Transform Properties

- Location: X: 0 m, Y: 0 m, Z: 0 m
- Rotation: X: 0°, Y: 0°, Z: 0°
- Scale: X: 1.000, Y: 1.000, Z: 1.000
- Dimensions: X: 0.5 m, Y: 0.3 m, Z: 0.6 m

Collection Browser (Body Collection)

- Body
 - Cube
 - Head
 - Left Thigh
 - Left Upper Arm
 - Right Thigh
 - Right Upper Arm
 - Animation
 - Plane.002
 - Right Lower Arm
- Camera
- Light

Timeline

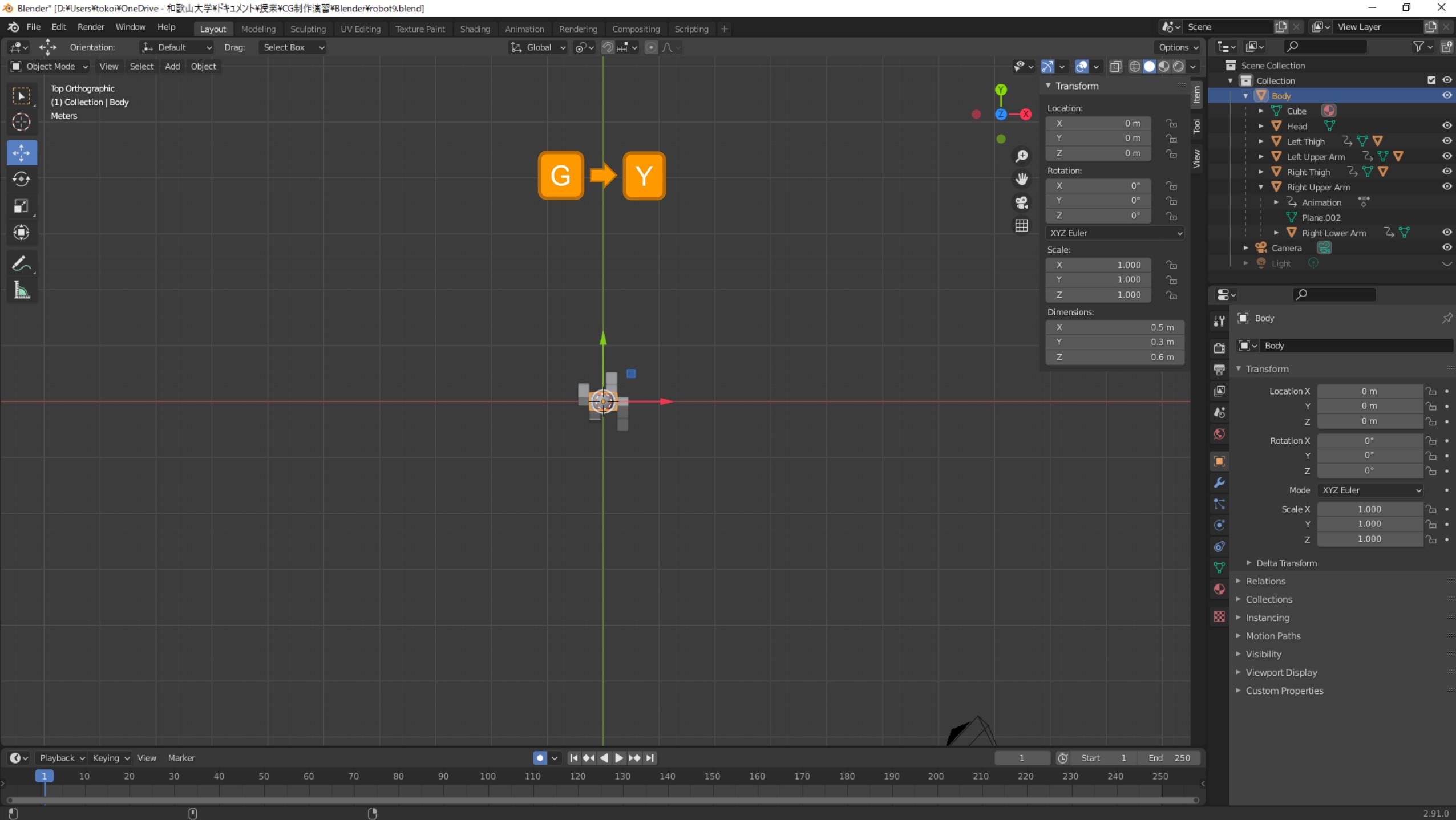
Frame: 120 (Current frame)

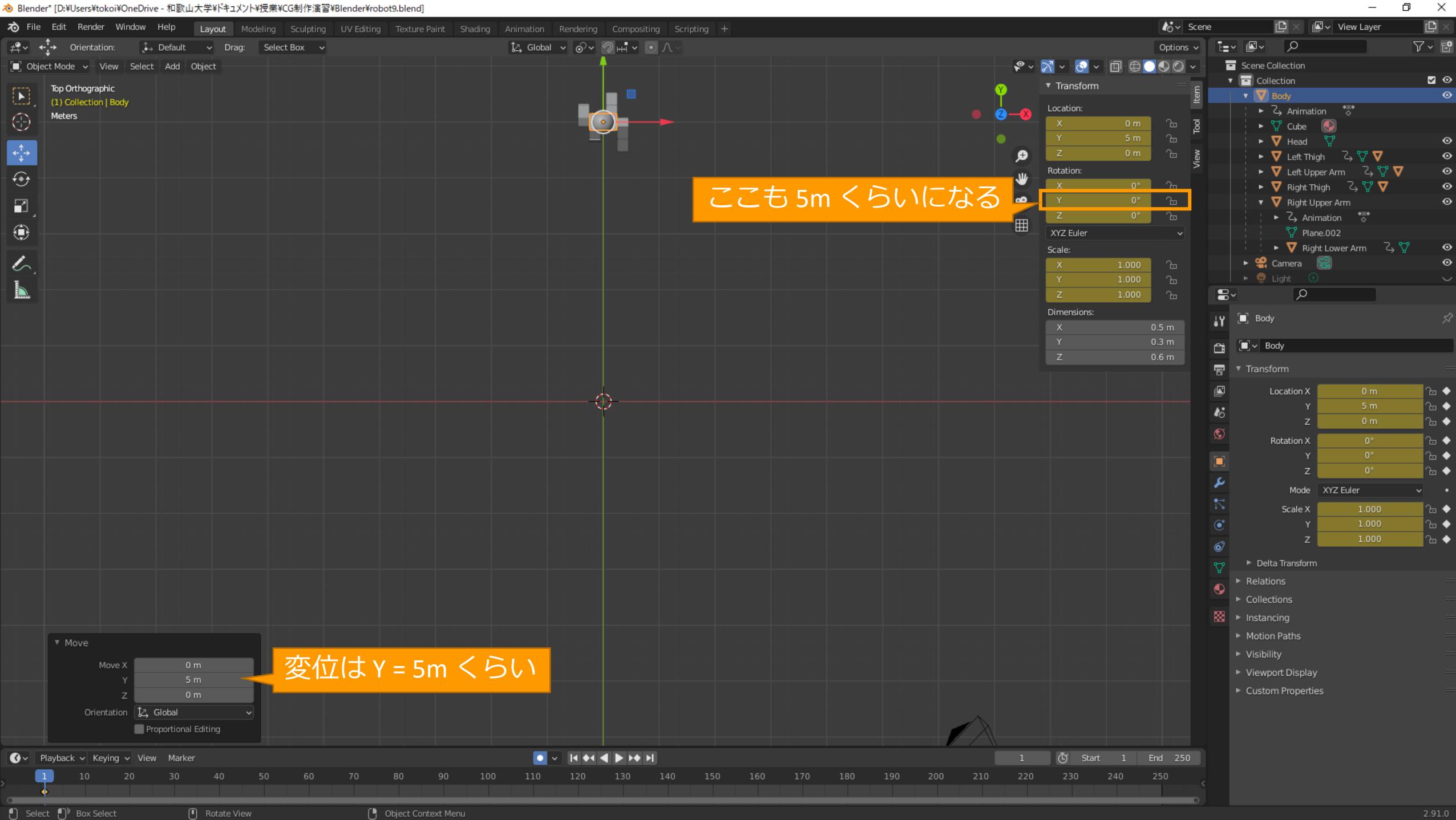
Playback controls: Previous, Next, First, Last, Start, End, Duration

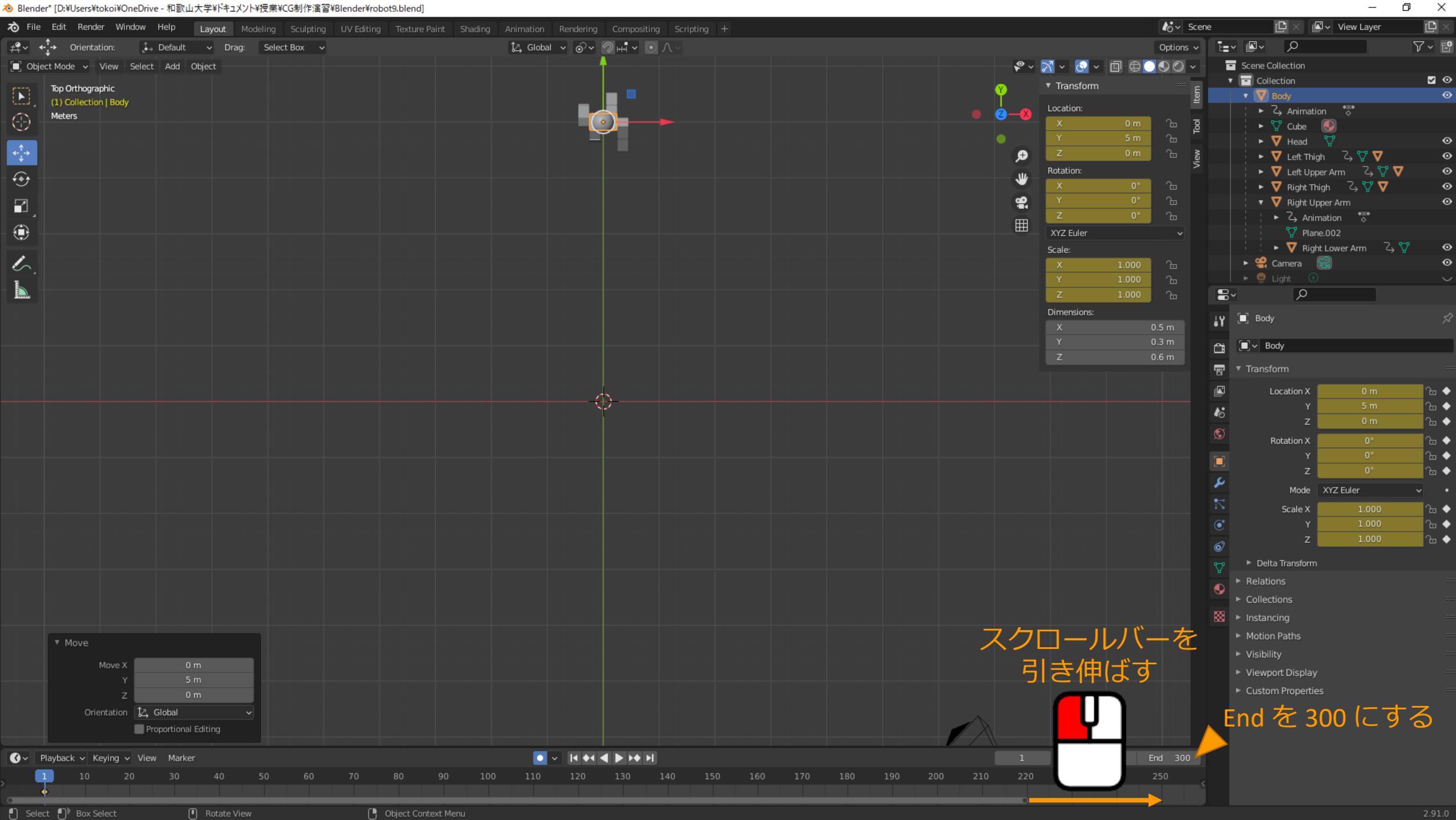
Marker: 1

Text Labels:

- Move (Orange Arrow)
- 1 フレーム目に戻す (Return to frame 1)







Blender 2.91.0

File Edit Render Window Help Layout Modeling Sculpting UV Editing Texture Paint Shading Animation Rendering Compositing Scripting +

Orientation: Default Drag: Select Box

Object Mode View Select Add Object

Top Orthographic (300) Collection | Body Meters

Transform

- Location:
 - X 0 m
 - Y 5 m
 - Z 0 m
- Rotation:
 - X 0°
 - Y 0°
 - Z 0°
- XYZ Euler
- Scale:
 - X 1.000
 - Y 1.000
 - Z 1.000
- Dimensions:
 - X 0.5 m
 - Y 0.3 m
 - Z 0.6 m

300 フレーム目に移動

Scene

Scene Collection

Collection

Body

- Animation
- Cube
- Head
- Left Thigh
- Left Upper Arm
- Right Thigh
- Right Upper Arm
 - Animation
 - Plane.002
- Right Lower Arm
- Camera
- Light

Body

Transform

- Location X 0 m
- Y 5 m
- Z 0 m
- Rotation X 0°
- Y 0°
- Z 0°
- Mode XYZ Euler
- Scale X 1.000
- Y 1.000
- Z 1.000

Delta Transform

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Playback Keying View Marker

Marker

300 Start 1 End 300

Pan View Context Menu

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300

300

