

## **rotateX, rotateY, rotateZ**

These properties allow you to rotate an element around the X, Y, or Z axis.

**rotateX(angle):** Rotates the element around the X-axis (horizontal axis).

- Imagine rotating a book around its top or bottom edge.
- Example: rotateX(45deg) will rotate the element 45 degrees around the X-axis.

**rotateY(angle):** Rotates the element around the Y-axis (vertical axis).

- Imagine rotating a book around its side edges.
- Example: rotateY(45deg) will rotate the element 45 degrees around the Y-axis.

**rotateZ(angle):** Rotates the element around the Z-axis (depth axis).

- Imagine rotating a book around the center of its front or back.
- Example: rotateZ(45deg) will rotate the element 45 degrees around the Z-axis (this is the most commonly used one).

## **translateX, translateY, translateZ**

These properties allow you to move (translate) an element along the X, Y, or Z axis.

**translateX(distance):** Moves the element along the X-axis (left or right).

- Example: translateX(50px) will move the element 50px to the right.

**translateY(distance):** Moves the element along the Y-axis (up or down).

- Example: translateY(50px) will move the element 50px down.

**translateZ(distance):** Moves the element along the Z-axis (into or out of the screen).

- Example: translateZ(100px) will move the element 100px closer to you (out of the screen) or into the screen, depending on the direction.

## **###Summary of the axes:**

- X-axis: Left/Right
- Y-axis: Up/Down
- Z-axis: In/Out of the screen (depth)

## **scaleX, scaleY, scaleZ**

These properties allow you to resize an element along the X, Y, or Z axis.

**scaleX(factor)**: Resizes the element along the X-axis (horizontal direction).

- Imagine stretching or shrinking a box horizontally.
- Example: `scaleX(1.5)` will make the element 1.5 times wider along the X-axis.

**scaleY(factor)**: Resizes the element along the Y-axis (vertical direction).

- Imagine stretching or shrinking a box vertically.
- Example: `scaleY(0.5)` will make the element half as tall along the Y-axis.

**scaleZ(factor)**: Resizes the element along the Z-axis (depth direction).

- Imagine making a box appear deeper or shallower as if it's moving closer or farther from you.
- Example: `scaleZ(2)` will make the element 2 times "deeper" or closer to you, depending on perspective.

## **skewX, skewY (2D skewing)**

These properties allow you to slant an element along the X or Y axis.

**skewX(angle)**: Skews (tilts) the element along the X-axis (horizontal direction).

- Imagine slanting a rectangle like a parallelogram.
- Example: `skewX(30deg)` will tilt the element 30 degrees along the X-axis.

**skewY(angle)**: Skews (tilts) the element along the Y-axis (vertical direction).

- Imagine slanting a rectangle along the vertical axis, like tilting the sides of a door.
- Example: `skewY(30deg)` will tilt the element 30 degrees along the Y-axis.