

Foreshortening

Art & Design

A form pointing towards you compresses in length but keeps its full width.

Apparent length shortens with the cosine of the angle to the picture plane. Width does not change.

$$\text{apparent length} = \text{true length} \times \cos \theta$$

Arm straight at you

Width unchanged.

Almost no length

Forearm at 60°

$\cos 60^\circ = 0.5$

Half its true length

Thigh at 30°

Barely shortened.

87% of true length

THE COMMON MISTAKE

✗ **Drawing the limb its known length**

✓ **Measuring the length actually visible**

Knowledge of the body overrides the eye. Measure the foreshortened limb against something else in the drawing before trusting what you see.

Overlap does the work the missing length cannot: a shoulder in front of a chest reads as depth even at zero length.