

Checkpoint 1:

checkPoint 1:

$$P_{xy} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & \cos(\frac{\pi}{4}) & -\sin(\frac{\pi}{4}) \\ 0 & \sin(\frac{\pi}{4}) & \cos(\frac{\pi}{4}) \end{pmatrix}$$

$$= \begin{pmatrix} 1 \\ 0 \\ \sqrt{2} \end{pmatrix}$$

$$= \begin{pmatrix} \cos(\frac{\pi}{4}) & \sin(\frac{\pi}{4}) \\ 0 & 1 \\ -\sin(\frac{\pi}{4}) & \cos(\frac{\pi}{4}) \end{pmatrix} = \begin{pmatrix} \frac{1+\sqrt{2}}{\sqrt{2}} \\ 0 \\ \frac{-1+\sqrt{2}}{\sqrt{2}} \end{pmatrix} = P_{xy}$$

CS Scanned with CamScanner

Checkpoint 2:

checkPoint 2:

$$P_{xy} = \begin{pmatrix} \sqrt{2} \\ 1 \\ 0 \end{pmatrix}$$

$$= \begin{pmatrix} 1 & 0 & 0 \\ 0 & \cos(\frac{\pi}{4}) & -\sin(\frac{\pi}{4}) \\ 0 & \sin(\frac{\pi}{4}) & \cos(\frac{\pi}{4}) \end{pmatrix} = \begin{pmatrix} \sqrt{2} \\ \frac{1}{\sqrt{2}} \\ \frac{1}{\sqrt{2}} \end{pmatrix}$$

CS Scanned with CamScanner

Checkpoint 3:

$$checkPoint 3: \quad \begin{pmatrix} 2 & + & 1 \\ -1 & + & 1 \end{pmatrix} = \begin{pmatrix} 3 \\ 0 \\ 3 \end{pmatrix}$$

CS Scanned with CamScanner

Checkpoint 4:

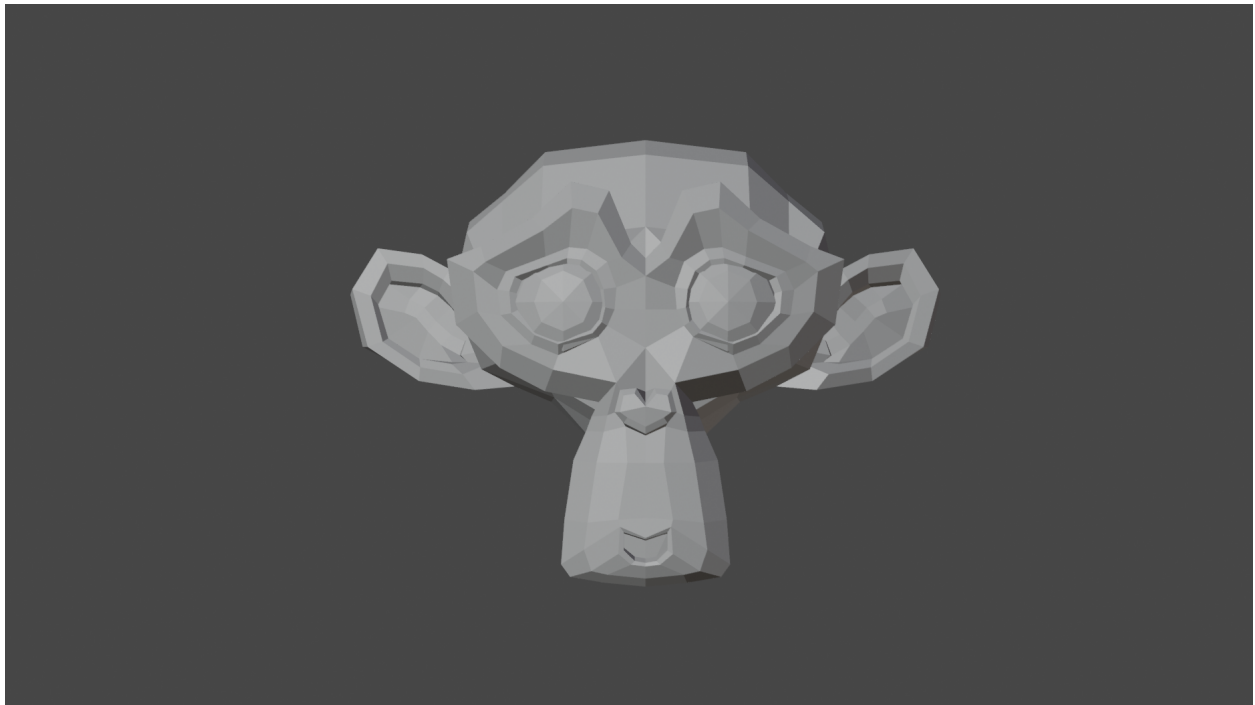
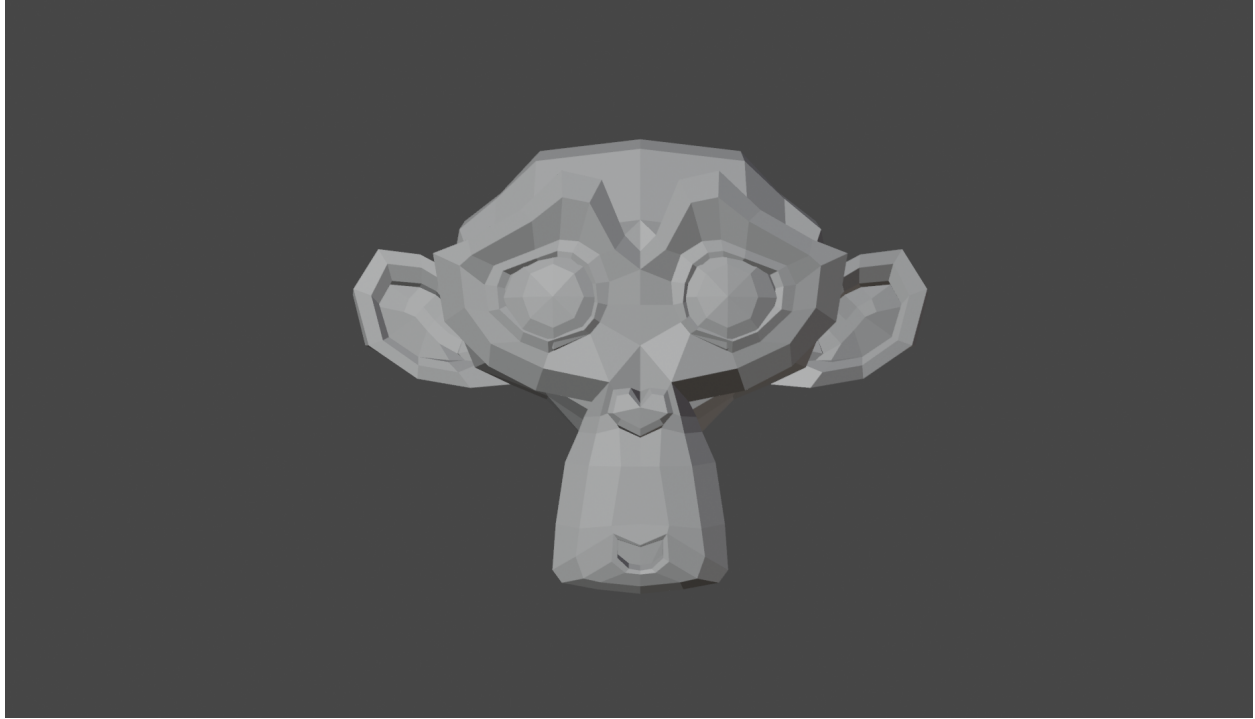
Checkpoint 4:

$$t_2 = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & \frac{\sqrt{2}}{2} & -\frac{\sqrt{2}}{2} & 1 \\ 0 & \frac{\sqrt{2}}{2} & \frac{\sqrt{2}}{2} & 2 \\ 0 & 0 & 0 & 1 \end{bmatrix} = \begin{bmatrix} 3 \\ -0.41421 \\ 2 \\ 1 \end{bmatrix}$$

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Checkpoint 5:





Checkpoint 6:

In three images the focus on which part of the image changes; it gets closer or farther. So, the focal point indicates the angle of view; how much of an image will be in the view.

Checkpoint 7:

