



From the graph, we can tell.

$AD_2 \perp P_2B$ .

$$A = \begin{bmatrix} 20 \\ 0 \\ z \end{bmatrix}, \quad B = \begin{bmatrix} 20 \\ 0 \\ 1 \end{bmatrix}$$

we want to get the expression for  $d = GP_2$

$$\begin{aligned} \frac{d}{PP'} &= \frac{D_2G}{D_2P'} = \frac{D_2B}{D_2A} = \frac{P_2B}{PA} \\ &= \frac{-u}{20-x} = \frac{1}{z} = \frac{1}{-x} \end{aligned}$$

$$\text{So, } d = -2u - 2$$