① $y=8x-5$ $\quad y=8x+1$

$(0,-5)$ and $y=8x+1$

slope $=8$

$\perp$ slope $=\frac{-1}{8}$

$y=\frac{-1}{8}x+c$

$-5=\frac{-1}{8}(0)+c$

$-5=c$

$y=\frac{-1}{8}x-5$ and $y=8x+1$

$8\left(\frac{-1}{8}x-5=8x+1\right)$

$-x-40=64x+8$

$\frac{-48}{65}=\frac{65x}{65}$

$x=\frac{-48}{65}$ $\quad y=8\left(\frac{-48}{65}\right)+1$

$y=-\frac{384}{65}+\frac{65}{65}$

$y=-\frac{319}{65}$

$(0,-5)$ and $\left(\frac{-48}{65},\frac{-319}{65}\right)$

$d=\sqrt{\left(0--\frac{48}{65}\right)^2+\left(-5+\frac{319}{65}\right)^2}$

$d=\sqrt{\frac{2304}{4225}+\frac{36}{4225}}=\sqrt{\frac{2340}{4225}}=\frac{\sqrt{2340}}{65}=\boxed{\frac{6\sqrt{65}}{65}}$