4) $A = \dfrac{2 \times (\cos 60^\circ + \sin 45^\circ)}{\tan 60^\circ} \times (\sqrt{6} - \sqrt{3})$

(1/2) $\begin{cases} \cos 60 = \sin 30 = \frac{1}{2} \\ \sin 45^\circ = \frac{\sqrt{2}}{2} \\ \tan 60^\circ = \frac{2}{\sqrt{3}} \end{cases}$

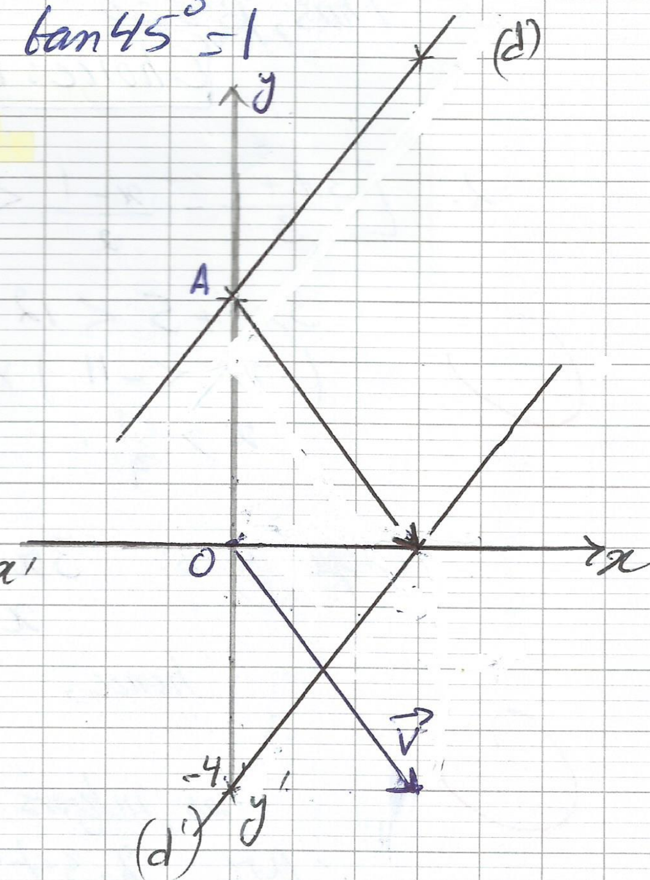
(1/2) $= \dfrac{2\left(\frac{1}{2} + \frac{\sqrt{2}}{2}\right)}{\sqrt{3}} \times (\sqrt{6} - \sqrt{3})$

$= \left(\dfrac{1+\sqrt{2}}{\sqrt{3}}\right) \times (\sqrt{6} - \sqrt{3})$

$= \dfrac{(\sqrt{6}+\sqrt{3})(\sqrt{6}-\sqrt{3})}{3}$

(1/2) $A = \dfrac{6-3}{3} = 1$ but $\tan 45^\circ = 1$

Thus, **Choice - A**



5) $(d): y = \frac{4}{3}x + 4$.

let $A(0,4)$ be a pt on (d).
& A' be image of A by $\vec{V}$
then, $\vec{AA'} = \vec{V}$.
So $X_{\vec{AA'}} = X_{\vec{V}}$

hence $x_{A'} = 3$ (1/2)
& $Y_{\vec{AA'}} = Y_{\vec{V}}$

hence $y_{A'} = 0$

but (d') is image of (d) by $\vec{V}$
So, $a_{(d')} = a_{(d)} = \frac{4}{3}$ (1/2)
So, $(d'): y - y_{A'} = a_{(d')}(x - x_{A'})$

Thus, $(d'): y = \frac{4}{3}x - 4$ (1/2) **Choice - A**