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$\frac{1}{2} \times \text{base} \times \text{height} = \frac{1}{2} \times \text{side} \times \text{side} \times \sin A$
 $\frac{1}{2} \times 2 \times \sqrt{2} \times \frac{1}{2} = \frac{1}{2} \times 2 \times 2 \times \sin A$
 $\sin A = \frac{1}{2} \Rightarrow A = 30^\circ$

محمد شيرازي 11/3 (2)

$S_{ABC} = \frac{1}{2} \times 2 \times \sqrt{2} \times \sin A = \sqrt{2} \sin A$
 $S_{ADE} = \frac{1}{2} \times 2 \times 2 \times \sin A = 2 \sin A$
 $S_{ABC} + S_{ADE} = \sqrt{2} \sin A + 2 \sin A = 1 + \sqrt{2}$
 $\sin A = \frac{1}{2} \Rightarrow A = 30^\circ$

if $\cos a > 0 \Rightarrow \frac{1}{\cos a} - \frac{\sin a}{\cos a} = \frac{1 - \sin a}{\cos a} \neq \frac{1 + \sin a}{|\cos a|}$
 if $\cos a < 0 \Rightarrow \frac{-1}{\cos a} - \frac{\sin a}{\cos a} = \frac{-1 - \sin a}{\cos a} = \frac{1 + \sin a}{|\cos a|}$
 if $\sin a > 0 \Rightarrow \frac{\sin a}{\cos a} \neq \frac{-\sin a}{\cos a}$
 if $\sin a < 0 \Rightarrow \frac{-\sin a}{\cos a} = \frac{-\sin a}{\cos a}$

$\tan(\frac{\pi}{2} - a) = \cot a$
 $\sin a = a + b \Rightarrow b = b \Delta$
 $a + b \Delta = 0$
 $a = -\frac{b}{\Delta} = \tan a$
 $\cot a = \frac{1}{\tan a}$

$\cos(\pi - \alpha) = -\sin \alpha$
 $\sin(\pi - \alpha) = \sin \alpha$
 $\sin(\pi + \alpha) = -\sin \alpha$
 $\cos(\pi + \alpha) = -\cos \alpha$

$\sin(\frac{\pi}{2} + a) = \cos a$
 $\sin(a - \pi) = -\sin(\pi - a) = -\sin a$
 $1 + \tan a = \frac{1}{\cos a} \Rightarrow 1 + \tan a = \frac{1}{\cos a} \Rightarrow \tan a = \frac{1}{\cos a} - 1$
 $\sin a + \cos a = 1 \Rightarrow \sin a = \frac{1}{2} \Rightarrow \sin a = \frac{1}{2}$

$\sin a + \cos a = 1 \Rightarrow \sin a = \frac{1}{2}, \cos a = \frac{1}{2}$

$(m-1)y = -\frac{1}{m-1} \Rightarrow y = \frac{1}{m-1}$
 $\sqrt{5^2 - 4^2} = \sqrt{9} = 3$

$\tan(\frac{\pi}{2} - \alpha) = \frac{1 - \tan \alpha}{1 + \tan \alpha}$
 $0 < 1 - \tan \alpha < 1 \Rightarrow 0 < 1 - m < 1 \Rightarrow -1 < m < 1$
 $0 < 1 + \tan \alpha < 1 \Rightarrow 0 < 1 + m < 1 \Rightarrow m < 0$

$\tan 45^\circ = \tan(\frac{\pi}{4} + 45^\circ) = -\cot 45^\circ = -1$
 $\cos 135^\circ = \cos(\pi + 45^\circ) = -\cos 45^\circ = -\frac{\sqrt{2}}{2}$
 $\tan 135^\circ = \tan(\pi + 45^\circ) = \tan 45^\circ = 1$
 $\sin 135^\circ = \sin(\pi + 45^\circ) = -\sin 45^\circ = -\frac{\sqrt{2}}{2}$

Finish