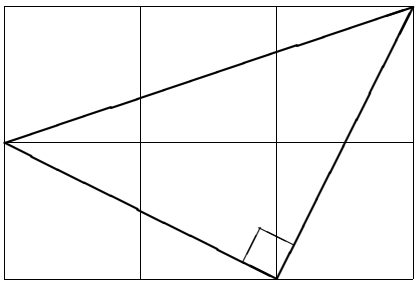
1, 2, 3, 4, π and Arc-Tangent



The above figure proves the following identities. Can you find them all?

$$\begin{aligned}
\tan^{-1}\left(\frac{1}{2}\right)+\tan^{-1}\left(\frac{1}{3}\right) &= \frac{\pi}{4}\\
\tan^{-1}(3)-\tan^{-1}\left(\frac{1}{2}\right) &= \frac{\pi}{4}\\
\tan^{-1}(2)-\tan^{-1}\left(\frac{1}{3}\right) &= \frac{\pi}{4}\\
\tan^{-1}(1)+\tan^{-1}\left(\frac{1}{2}\right)+\tan^{-1}\left(\frac{1}{3}\right) &= \frac{\pi}{2}\\
\tan^{-1}(1)+\tan^{-1}(2)+\tan^{-1}(3) &= \pi
\end{aligned}$$

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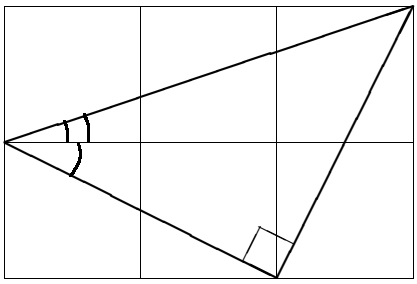
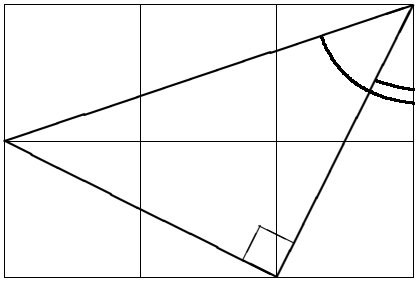
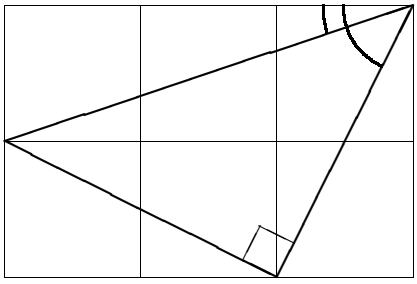


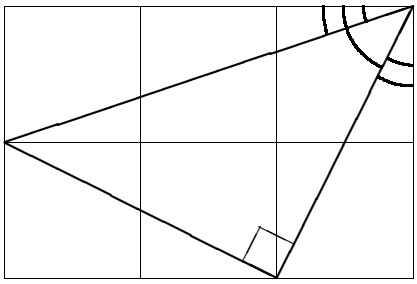
$$\tan^{-1}\left(\frac{1}{2}\right)+\tan^{-1}\left(\frac{1}{3}\right)=\frac{\pi}{4}$$



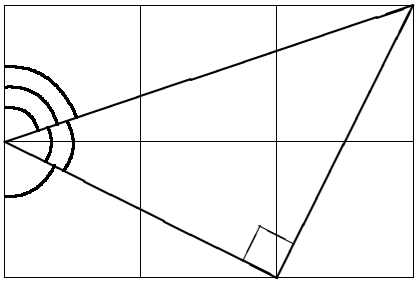
$$\tan^{-1}\left(3\right)-\tan^{-1}\left(\frac{1}{2}\right)=\frac{\pi}{4}$$



$$\tan^{-1}\left(2\right)-\tan^{-1}\left(\frac{1}{3}\right)=\frac{\pi}{4}$$



$$\tan^{-1}(1) + \tan^{-1}\left(\frac{1}{2}\right) + \tan^{-1}\left(\frac{1}{3}\right) = \frac{\pi}{2}$$



$$\tan^{-1}(1) + \tan^{-1}(2) + \tan^{-1}(3) = \pi$$