



## **PICTORIAL PROOF OF TANGENT DIFFERENCE IDENTITY**

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### **Abstract**

In this paper, we give a pictorial proof of tangent difference identity.

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Received: September 21, 2025; Accepted: October 16, 2025

Keywords and phrases: tangent difference identity.

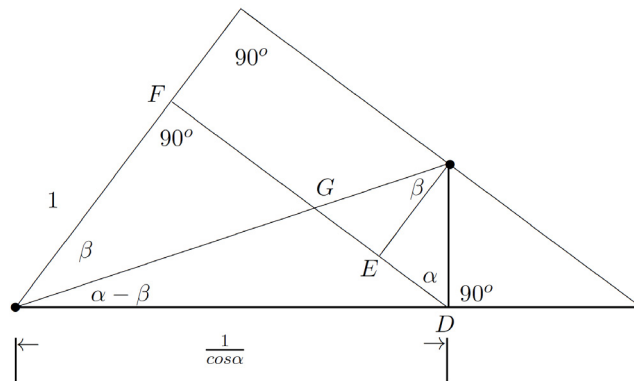
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How to cite this article: Long Wang, Pictorial proof of tangent difference identity, Far East Journal of Mathematical Education 28(1) (2026), 1-2.

<https://doi.org/10.17654/0973563126001>

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Published Online: November 27, 2025

**1. Proof**

$$\tan \alpha - \tan \beta = \tan(\alpha - \beta) + \tan(\alpha - \beta) \tan \alpha \tan \beta,$$

$$(DF - GF = DE + GE).$$

**2. Summary**

A visual proof of the tangent difference identity

$$\tan(\alpha - \beta) = \frac{\tan \alpha - \tan \beta}{1 + \tan \alpha \tan \beta},$$

is given.

**References**

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