

7 Points on a Plane

History and provenance

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The Moser spindle

The seven-point construction in the accompanying solution is the *Moser spindle*, associated with Leo and William Moser's *Solution to Problem 10* in the *Canadian Mathematical Bulletin* (1961) [1]. A later historical account discusses the construction and its continuing role in geometry [2].

It is often introduced as a unit-distance graph: seven points are vertices, and certain unit-distance pairs are joined by edges. It is important in the problem of coloring the plane so that points one unit apart have different colors.

Its relation to this puzzle

The same arrangement has the property requested here: every choice of three points contains a unit-distance pair. The accompanying PDF proves that property directly, without requiring graph coloring terminology.

This identifies the construction, not the first person to phrase the challenge exactly as “seven points, any three.” I did not establish that wording's first publication, and no uniqueness claim is made.

The previously supplied `7_Points_Update.pdf` is a separate, preserved document. It has not been replaced or reattributed to ChatGPT.

Sources

[1] Leo Moser and William Moser, Solution to Problem 10, *Canadian Mathematical Bulletin* 4(2) (1961), 187–189.

<https://doi.org/10.1017/S0008439500025765>

[2] Veselin Jungić, Still Spinning: The Moser Spindle at Sixty, *Mathematics Magazine* (2023).

<https://doi.org/10.1080/0025570X.2023.2176684>

Sources checked September 7, 2026. A documented appearance is not necessarily the earliest appearance.