

TRIANGLES FROM AREAS

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Abstract. We consider the problem to determine for which central points X of the triangle ABC will the areas of triangles BCX , CAX , and ABX be sides of a triangle. We shall prove that only nine out of hundred and one central points from Kimberling's list have this property. The algebraic method of proof for this result is also used to obtain some new examples of three areas that are sides of a triangle and are build from elements of a given triangle.

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Key words and phrases: triangle, area, triangular triple, inequality, central point, pedal, antipedal, areal coordinates.

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