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**Classification of amply regular graphs with  $b_1 = 6$ .** (English. Russian original) [Zbl 1304.05033](#)  
*Proc. Steklov Inst. Math.* 283, Suppl. 1, S46-S55 (2013); translation from *Tr. Inst. Mat. Mekh. (Ekaterinburg)* 18, No. 3, 90-98 (2012).

Summary: An undirected graph with  $v$  vertices in which the degrees of all vertices are equal to  $k$ , each edge is contained in exactly  $\lambda$  triangles, and the intersection of the neighborhoods of any two vertices at distance 2 contains exactly  $\mu$  vertices is called amply regular with parameters  $(v, k, \lambda, \mu)$ . We complete the classification of amply regular graphs with  $b_1 = 6$ , where  $b_1 = k - \lambda - 1$ .

**MSC:**

[05C12](#) Distance in graphs

[05C07](#) Vertex degrees

**Keywords:**

amply regular graph; distance-regular graph

**Full Text:** [DOI](#)

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