

PATTERN method

Exercise 1.

A company that deals with the basic computer courses and English language courses wants to expand business. That expansion (in teaching and book sales) could be achieved through introduction of specialized courses, introduction of certified courses and books translation in order to improve sales. For introduction of specialized courses, company needs more classrooms, a significant marketing investment and hiring new teachers. For introduction of certified courses company will need to hire certified experts for each area. Book translations, which are to increase sales, demand organizing the printing and the transportation. Criteria at level II are: costs of hiring, quality and intensity of competition.

Criteria at level III are: costs of hiring, quality and the possibility of new competitive programs emerging.

Three experts were assigned to weigh the individual criteria at level II and III.

Criteria weights at level II:

(0.30, 0.50, 0.20, 0.40, 0.40, 0.20, 0.20, 0.50, 0.30);

Criteria weights at level III

(0.20, 0.50, 0.30, 0.45, 0.45, 0.10, 0.50, 0.40, 0.10).

Contribution marks of goals to criteria for the first expert at second level: 0.50, 0.30, 0.30, 0.30, 0.60, 0.50, 0.20, 0.10, 0.20.

Contribution marks of goals to criteria for the second expert at second level: 0.50, 0.34, 0.25, 0.50, 0.33, 0.25, 0, 0.33, 0.50.

Contribution marks of goals to criteria for the third expert at second level: 0.50, 0.20, 0.40, 0.40, 0.20, 0.40, 0.10, 0.60, 0.20.

Contribution marks of goals to criteria for the first expert at third level: 0.15, 0.05, 0.05, 0.25, 0.30, 0.20, 0.30, 0.15, 0.30, 0.15, 0.15, 0.20, 0.10, 0.25, 0.15, 0.05, 0.10, 0.10.

Contribution marks of goals to criteria for the second expert at third level: 0, 0.20, 0.10, 0.20, 0.20, 0.50, 0.30, 0.30, 0.20, 0.30, 0.30, 0.20, 0.10, 0, 0, 0.10, 0, 0.

Contribution marks of goals to criteria for the third expert at third level: 0, 0.10, 0, 0, 0, 0, 0.50, 0.40, 0.50, 0.50, 0.40, 0.50, 0, 0.10, 0, 0, 0, 0.

- a) Form the relevance tree;
- b) Calculate the priority of goals based on the local and direct relevance numbers.