

Criteria

Senior league

Problem 1

Answer only: 0 points

Correct answer with an example: 3 points

Estimate: 3 points

Problem 2

Unproven claim that the locus of X is the circle centered at the common point of external tangents: 0 points

Problem 3

Correct colouring without proof: 2 points

Problem 5

Second differences $f(x+2) - 2f(x+1) + f(x)$ are considered: 1 point

The problem is solved for positive integral exponents: 3 points

(these points are not additive)

Junior league

Problem 1

When the correct strategy is applied to the last 15 candies, the proof is missing that the number of candies remains positive: -1 point

The position with N candies is analysed with a tacit assumption that both moves are possible in the initial position: -1 point

Problem 2

Completing the square mod p (covering all parities of a and b): 1 point

The problem is solved for even a and b : 3 points

(these points are not additive)

Problem 3

Noted that I is the orthocentre of the triangle BDE : 0 points

Proved that (in the official solution notation) $\angle HIG = 90^\circ$: 3 points

Problem 4

The graph $K_{100,100}$ or similar is considered: 0 points

Problem 5

Correct answer with an example: 2 points