SAMPLE TASKS IN THE AREA:

QUANTITATIVE PROBLEM SOLVING

This task group concerns verbally described quantitative questions from the business world and from everyday life in general. Practical logical reasoning in the numerical area and confidence in dealing with the basic rules of arithmetic, combinatorics and algebra are primarily tested.

1. Mr. Bangbüx wants to increase his securities portfolio and structure it so that the total value at the time of the increase is distributed in the ratio 2: 4: 3 to equity funds, fixed income securities and real estate funds. So far, the portfolio only contains 52,000 EUR fixed income securities, which are to be retained unchanged as a relevant proportion.
For what amount do real estate funds have to be added and how high will the total financial value of the portfolio be at the time of the increase?

(A) Real estate funds: 26 000 EUR; Total value: 91,000 EUR
(B) Real estate funds: 26 000 EUR; Total value: 117,000 EUR
(C) Real Estate funds: 39,000 EUR; Total value: 117,000 EUR
(D) Real estate funds: 39 000 EUR; Total value: 130,000 EUR

Level: basic
Answer: C

2. According to a method frequently used to value companies until a few years ago, the value of the company (UW) is derived from the following formula:

\[ UW = SW + 5 \left( G - \frac{10}{100} \times UW \right) \]

Key:
SW: Net asset value;
G: Expected profit.

Which of the following formulae represent a correct simplification of the above formula?

(A) \( UW = \frac{3}{2} (SW + 5G) \)
(B) \( UW = 2(SW + 5G) \)
(C) \( UW = \frac{100}{3} (SW + G) \)
(D) \( UW = \frac{2}{3} (SW + 5G) \)

Level: intermediate
Answer: D
3. At a lecture given at the German Banking Day so many listeners appeared that only three-quarters fit into the designated lecture room. It was therefore decided to give the lecture in a second room. Finally, the second lecture room was occupied by 150 listeners, and in the first hall there were still 5 free places left.

How many listeners are there in total in the two lecture rooms?

(A) 430 listeners
(B) 580 listeners
(C) 585 listeners
(D) 620 listeners

Level: Advanced
Answer: B