

- 1.** A lecture given by a guest lecturer has so many audience members that only three quarters of them fit into the intended auditorium. A decision is therefore made to transmit the presentation to a second auditorium. In the end the second auditorium is filled with 78 audience members and the first auditorium still has 3 places free.
How many audience members are there in total in both auditoriums?
- (A) 324 audience members
 - (B) 303 audience members
 - (C) 300 audience members
 - (D) 231 audience members
- 2.** A company pays an employee €0.30 for each kilometre driven on a business trip (outward and return journey) if he or she uses their own car for the trip. If the employee rents a car, the company pays for the car rental fees and the petrol costs. The costs of renting a car are €90 and the petrol costs are €0.10 per kilometre.
At what distance to the business trip's destination is it cheaper for the company if the employee uses his or her own car?
- (A) < 225 km
 - (B) > 225 km
 - (C) < 450 km
 - (D) > 450 km
- 3.** A company division is allocated monthly costs C . These are calculated on the basis of the arithmetic mean (average) of the costs C_1 and C_2 . In April C_1 was five times greater than C_2 .
By what percentage does C change if, in the following month C_2 is doubled and C_1 is halved?
- (A) -25%
 - (B) -12.5%
 - (C) $\pm 0\%$
 - (D) +25%

4. Overall profitability is an indicator which shows the total return on capital employed in the company. It can be calculated using the following formula:

$$\text{Overall profitability} = \frac{\text{Profit} + \text{Debt capital interest}}{\text{Total capital}} \cdot 100\%$$

Which of the following statements is **not** correct?

- (A) If total capital is doubled and profit and debt capital interest remain unchanged, overall profitability is halved.
- (B) Overall profitability can amount to no more than 100%.
- (C) Given a profit of €90,000, debt capital interest of €30,000, and a total capital of €600,000, there is an overall profitability of 20%.
- (D) Overall profitability can also have negative values.

Solutions:

- 1 C
- 2 A
- 3 A
- 4 B