I'm not a bot

Hello student! I've prepared a list of exercises on Arithmetic and Geometric Progressions for you to practice. I recommend taking your time to solve each problem, then checking the answer key and solution. Good luck with your studies, and I hope these exercises help you achieve your goals. Before starting the exercises, please review the formulas for PA (Aritmética) and PG (Geométrica) below: * Exercício 1: A triangle has sides of length x+1, 2x, and x^2-5. The lengths are in an arithmetic progression. What is the perimeter of the triangle? Options: a) 18 cm, b) 25 cm, c) 15 cm, d) 24 cm, e) 20 cm * Exercício 2: A tractor factory aims to produce 20,000 tractors by 2025. The graph shows the production from 2010-2017. Assuming the same growth rate continues, will the target be met? Options: a) yes, exceeded by 80 tractors; b) yes, exceeded by 150 tractors; c) no, 1,850 fewer tractors; d) no, 150 fewer tractors; e) no, 80 fewer tractors * Exercício 3: A small town decides to install streetlights along a straight road. The first light is 80 meters from the central square, and subsequent lights are spaced 20 meters apart. The last light is 1,380 meters from the square. If each light costs R$8,000, what is the maximum amount that can be spent? Options: a) R$512,000, b) R$520,000, c) R$528,000, d) R$552,000, e) R$584,000 * Exercício 4: A wrapping paper cylinder has an outer radius of 3 cm. The paper is 0.01 cm thick and wraps around the cylinder 100 times. With each wrap, the outer radius increases by the thickness of the paper. What is the total length of the wrapping paper? Options: (A) 9.4 m, (B) 11.0 m, (C) 18.8 m, (D) 22.0 m, (E) 25.1 m * Exercício 5: A rectangular prism has three edges that form a geometric progression with ratio 2. The total area of the prism is 28 cm^2. What is the value of the diagonal? Options: a) √17 cm, b) √19 cm, c) √21 cm, d) 2√7 cm, e) √29 cm * Exercício 6: The seventh term in a geometric progression has a value of ... Para garantir que a soma dos comprimentos de todas as diagonais dos quadrados seja maior ou igual a 420,2 cm. 07 (Héwerton-MG). Encontrar uma Progressão Aritmética crescente de 4 termos inteiros com uma soma de 32 e um produto de 3465. 08 (ITA-SP). Quantos números inteiros existem entre 1000 e 10,000 que não são divisíveis tanto por 5 quanto por 7?