



- 17 What is the explicit form of the equation $a_n = a_{n-1} + 2(n - 1)$; $a_1 = 1$?

A $a_n = 2n - 1$
 B $a_n = n^2 - n + 1$
 C $a_n = n^2 - 2n + 2$
 D $a_n = 2n^2 - 2n - 1$

- 18 An investor bought 1,500 shares of a stock for \$6 a share. He estimates the probability that the stock will rise to a value of \$25 a share is 24%, and the probability it will fall to \$2 a share is 76%. What is the expected value of the investor's profit from buying the stock?

A \$13,560
 B \$9,120
 C \$6,720
 D \$2,280

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- 19 A Ferris wheel is designed in such a way that the height (h), in feet, of the seat above the ground at any time, t , is modeled by the function

$$h(t) = 60 - 55 \sin\left(\frac{\pi}{10}t + \frac{\pi}{2}\right).$$



What is the **maximum** height a seat reaches?

A 55 feet
 B 60 feet
 C 110 feet
 D 115 feet

- 20 A teacher counts the final exam as 25% of each student's class grade. The remaining 75% is the mean of the student's test scores from the semester. Jaleesa's test scores for the semester are 86, 90, 92, and 80. What is the **minimum** score Jaleesa must get on the final exam to have a class grade of 85.0 or higher?

A 77
 B 79
 C 81
 D 83

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- 21 Two sides of a triangle measure 10 inches and 13 inches. The included angle between these sides is 55° . What is the **approximate** measure of the third side of the triangle?

A 10.9 inches
 B 11.2 inches
 C 13.9 inches
 D 16.2 inches

- 22 The third term of a geometric sequence is 96, and the fifth term is 1,536. What is the sum of the first ten terms of this sequence?

A 4,092
 B 1,572,864
 C 2,097,150
 D 33,554,400

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