

Station 3

1. Find the sum of the first six terms of the geometric sequence: $-5, -15, -45, \dots$

- A) -364
- B) -65
- C) -1820
- D) 1820

2. Write the first five terms of the geometric sequence.

12) $a_1 = 1, r = \frac{3}{1}$

- A) $1, \frac{1}{3}, \frac{1}{9}, \frac{1}{27}, \frac{1}{81}$

- B) $1, 3, 9, 27, 81$

- C) $1, \frac{4}{3}, \frac{5}{3}, 2, \frac{3}{3}$

- D) $\frac{1}{3}, \frac{1}{9}, \frac{1}{27}, \frac{1}{81}, \frac{1}{243}$

3. Find $2 + 4 + 6 + 8 + \dots$, the sum of the first 25 positive even integers.

- A) 624
- B) 654
- C) 650
- D) 620

4. Use the formula for the general term (the n th term) of an arithmetic sequence to find the indicated term of the sequence with the given first term, a_1 , and common difference, d .

Find a_{33} when $a_1 = 3, d = -1$.

- A) -29
- B) 36
- C) 35
- D) -30

5. Find a_{10} when $a_1 = 27, d = -5$.

- A) -23
- B) 72
- C) -18
- D) -45

$$S_6 = \frac{-5(1-(3)^6)}{1-(3)}$$