ind the designated sum of the arithmetic series

$_4$ of $3 + 7 + 11 + 15 + \cdots$

$Sn = \left(\dfrac{14}{2}\right)(3+55) = \boxed{406}$

b) S_{11} of $-13 - 11 - 9 - 7 - \cdots$

$Sn = \left(\dfrac{11}{2}\right)(-13+7) = \boxed{\text{3}}$

2. Write the explicit and recursive formula for the following sequences

a $40, \ 43, \ 46, \ 49, \ 52, \ ...$

$a_n = 40 + (n-1)3$
$a_n = a_{n-1} + 3$

b $-4, \ 12, \ -36, \ 108, \ -324, \ ...$

$a_n = -4(3^{n-1})$
$a_n = a_{n-1} \cdot 3^n$

the designated sum of the geometric series

f $4 + 8 + 16 + 32 + \cdots$

$Sn = \dfrac{4(1-2^7)}{(1-2)} \boxed{=508}$

b) S_{13} of $1 - 6 + 36 - 216 + \cdots$

$Sn = \dfrac{1(1+6^{13})}{(1+6)} = 186581\text{...}$

Day 5:
Samples & Surveys

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population : ALL the members of a set

Sample : PART of a population

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ypes of Samples

Stratified Random Sample ___ method of sampling that involves the division of a population into the smaller group known as the strata

Simple Random Sample ___ subset of a statistical population in which each member e subset has an equal opportunity of being chose.

Voluntary Response Sample invites any member of the population to participate in t rvey

Systematic Sample ___ order the population in some way and then select from it gular intervals

Convenience Sample ___ select any member of the population who are convenien d readily available.

Clustered Sample ___ population is divided into separate groups called cluste

Example 1: Identify the sampling method & state any bias.

bias = unfair

a) A newspaper has an ad to invite people to call in and complete a survey on what type of comics they like best.

voluntary, Bias!

b) The Drama Club selects every 5th student from an alphabetical list of all the students at the school to take a survey to find what type of drama performance that the student body would like to see.

Systematic, not bias!

c) A psychologist uses a computer program to randomly select names from a list of students at a university to take a survey on their exercise habits at college.

Simple random, not bias!

d) A reporter asks people leaving a gym what types of workouts that they like the best.

Convenience   Bias!