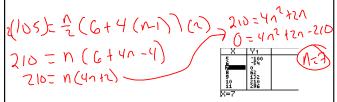
## 11.2 Series

## PRACTICE

## Directions: Use the partial sequence to answer the questions.

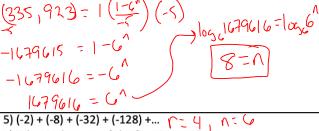
- 1) 3 + 7 + 11 + 15 +....
- a) What is the sum of the first 12 terms?

b) How many terms are there if the sum is 105?

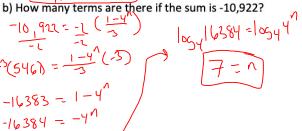


$$S(7) = -\frac{279935}{-5}$$

b) How many terms are there if the sum is 335,923?

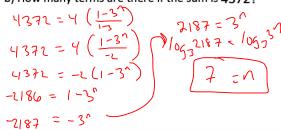


- a) What is the sum of the first 6 terms?

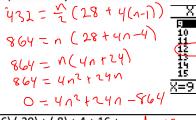


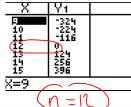
- 2) 4+12+36+108+... Y=3 ) N=10
- a) What is the sum of the first 10 terms?  $5(16) = 4(\frac{1-3}{100})$

b) How many terms are there if the sum is 4372?



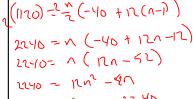
b) How many terms are there if the sum is 432?





- 6) (-20) + (-8) + 4 + 16 + ... d = 12 n = 10a) What is the sum of the first 10 terms? d = 10 d = 10 d = 10

b) How many terms are there if the sum is 1120?





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9) Mr. Kelly has the GREATEST (nerdiest) way to assign students to homeroom on their first day of school. He puts 3 kids in the first room, 10 kids in the second room, 17 kids in third room and so on until all the kids are in a room. 3,10,17 -> d=7 a) How many kids will be in the 15th room?  $\eta = 15$ F(K) = 3+7(15-1) F(15) = 101 KIdS b) How many classrooms will they need if the school has 1125 students?  $\frac{1}{2} \left( \frac{1}{12} \right) = \frac{1}{12} \left( \frac{1}{12} + \frac{1}{2} (\frac{1}{12} + \frac{1$ 10) Mr. Brust really needs to start lifting weights. On Monday he does one bench press of 50 pounds. Each day the amount of weight Mr. Brust does for that single bench press increases by 20%. 50,60,72 a) How much weight is his one bench press on Thursday?  $P(4) = 50 (12^3) = 86.4 \text{ for the wee}$ b) If he continued this pattern Monday through Sunday, how much total weight did he lift for the week?  $5(7) = 50 \left( \frac{1 - 1 \cdot 1^{7}}{1 - 1 \cdot 2^{7}} \right)$ = 50 (12,914) = 645,7952 POUNDS TOTAL 11) The Algebros start a side business selling t-shirts. The first year they make \$500 (mostly from family and friends). The next several years the revenue increased by about 6.8% each year. a) How much revenue did they make in their fifth year? (=1,008) = 500 (1,008) = 500 (1,008Y) \$\frac{1}{1650,51}\$ NOT A b) How much total revenue did they make after five years?  $\frac{1}{1-1}$ ,  $\frac{1}{1}$ = 500 (5,7278) = \$2863,92 12) The Algebros are going to try to create the largest HUMAN PYRAMID in history. They call the Guiness Book of World Records in fact! The bottom row of the pyramid has 49 people, the next row has 47 people, and the third row has 45 people and so on. a) What row number has only 1 person in it? 1= 49 -2 (n-1) -48 = -2(n-1) b) If the last row only has 1 person in it, how many total people are in the human pyramid? S(n) = 25 (98 - 2(25-1)) = NS (98-2(29)) =12.5 (98-48) =12.5(56) = [625 PEOPLE Directions: Solve the given equations.  $13\left(\frac{4}{3} - \frac{y}{y + 4} = \frac{1}{2}\right) 2(3)(\gamma + 1)$ 4(0(41) - 2(0)(4) = 3(41) 8(41) - 64 = 34+3 8418 -CY =34 K3 2y+8 = 3y+3

Mar 25-6:25 PM