

DO NOW

Find the sum of the series.

a)

$$\sum_{n=1}^4 (2n + 3)$$

Find the number of terms in the series.

b)

$$(-2) + (-12) + (-22) + (-32) \dots, S_n = -224$$

c) Write the following using series notation (sigma).

$$2 + 4 + 6 + 8 + \dots + 30$$

HW Questions?? p. 710 -711 # 10 - 12, 22 - 24

Word Problem Applications

- 1) Recognize t_1, d, n, t_n
- 2) If you are missing any of the above, **solve** for them
- 3) Use **explicit formulas** for t_n and S_n
- 4) Solve for **requested values**
(pay attention to units!)

1) Daniela borrowed some money from her parents. She agreed to pay \$50 at the end of the first month and \$25 more each addition month for 12 months. How much does she pay **in total** after the 12 months?

2) When an object is in free fall and air resistance is ignored, it falls 16 feet in the first second, an additional 48 feet during the next second, and 80 feet during the third second. How **many total feet** will the object fall in 10 seconds?

18) The prizes in a weekly radio contest began at \$150 (first week) and increased by \$50 for each week that the contest lasted. If the contest lasted for eleven weeks, how much was awarded **in total**?

19) There are 28 seats in the front row of a theater. Each successive row contains two more seats than the previous row. If there are 24 rows, how many seats are in **last row** of the theater? How many seats in **total**?

20) A radio station is offering a total of \$8500 if prizes over ten hours. Each hour, the prize will increase by \$100. Find the amounts of the first and last prize.

HW: p. 710 -711 #7, 13, 16, 25, 36, 37, 46

TEST FRIDAY

on

ARITHMETIC SEQUENCE AND SERIES