

Algebra II

pg 521

2)	$3+6+9+12+15+18+21+24=108$	12)	$\sum_{n=1}^{24} 3 \cdot 4^n$	22)	$\sum_{n=1}^{\infty} 8 \left(-\frac{1}{2}\right)^{n-1}$
4)	$10+13+16+19+22+25+28=133$	14)	$\sum_{n=3}^{15} \frac{1}{5^n}$	24)	$\sum_{n=1}^6 n^2+1$
6)	$1+\frac{1}{4}+\frac{1}{16}+\frac{1}{64}=\frac{85}{64}$	16)	$\sum_{n=1}^{100} 4n-1$	26)	$\sum_{n=1}^{\infty} \frac{(-1)^{n-1}}{2n-1} \approx \sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1}$
8)	$1-8+81-1024=-950$	18)	$\sum_{n=1}^{11} \sqrt[3]{n}$	28)	$\sum_{n=1}^9 10n+2$
10)	$\sum_{n=1}^{50} 5n$	20)	$\sum_{n=1}^{\infty} \left(\frac{1}{3}\right)^{n-1}$	30)	$\sum_{n=1}^{11} 50n-42$

16) $3+7+11+15+\dots+399$
 $d=4$

$$a_n = a_1 + (n-1)d$$

$$399 = 3 + (n-1)4$$

$$399 = -1 + 4n$$

$$400 = 4n$$

$$100 = n$$

$$\sum_{n=1}^{100} (-1+4n)$$

$$24) \quad \begin{array}{cccccc} & 1 & 4 & 9 & 16 & 25 & 36 \\ 2 & + & 5 & + & 10 & + & 17 & + & 26 & + & 37 \\ & +3 & +5 & +7 & +9 & +11 & & & & & \\ 1 & & 2 & & 3 & & 4 & & 5 & & 6 \end{array}$$

$$\sum_{n=1}^6 n^2 + 1$$

30) 11 terms

$$\begin{array}{cc} 8 & 508 \\ a_1 & a_{11} \end{array}$$

$$a_{11} = 508 = 8 + (n-1)d$$

$$508 = 8 + (11-1)d$$

$$500 = 10d$$

$$50 = d$$

$$\sum_{n=1}^{11} 8 + (n-1)50$$