Assignment
P. 626 (41-63 odd, 70)

9.2 Part 2

Use Recursion formula

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

(42) $a_1 = 3 \quad a_2 = 13$

$d = \frac{13-3}{2-1} = 10$

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

$a_9 = 3 + (9-1)(10)$

$= \boxed{83}$

Find the Sum of Finite Arithmetic Sequence

$$S_n = \frac{n}{2}(a_1 + a_n)$$ → n = # of terms

(46) $1 + 4 + 7 + 10 + 13 + 16 + 19$ — 7 terms

a_1 $\quad$ a_7

$S_7 = \frac{7}{2}(1 + 19)$

$= \boxed{70}$

ex: ACT question

Sum of 1 to 100 (100 terms)

$\frac{100}{2}(1 + 100)$

$50(101) = 5050$

Find the partial Sum of Ar.th. Seq.

(52) $-6, -2, 2, 6, \ldots \quad n = 100$

$d = -2 - -6 = 4$

$n = 100$

last term → $a_{100} = -6 + (100-1)(4) = 390$

$S_{100} = \frac{100}{2}(-6 + 390) = \boxed{19,200}$

9.2 Part 2

Side Note: How many terms from

1 to 5 = $\boxed{5}$

but if you subtract you get 4

$5-1=4$

so add one to set the # of terms $5-1=4+1=\boxed{5}$

(56) Find the Sum

$$\sum_{n=51}^{100} 7n$$

number of terms = $100-51+1=50$

$49+1$

$a_{51} = 7(51)$ $\quad a_{100} = 7(100)$

357 $\quad$ 700

$$S = \frac{50}{2}(357+700) = \boxed{26,425}$$

(69) $a_1 = \$32,500$ $\quad$ Rate $= d = \$1500$

a) Salary on 6th year

$a_6 = 32500 + (6-1)1500$

$= \boxed{\$40,000}$

b) Total (Sum)

$S = \frac{6}{2}(32,500+40000)$

$= \boxed{\$217,500}$

* Remember you can use QR codes or go to Calcview.com to watch videos of those in red.