2.4
10d, 20, 25d, 33b

CS245 Homework 3

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10d. $a_0 = -1$

$a_1 = 0$

$a_2 = 2(0) + (-1)^2 = 1$

$a_3 = 3(1) + 0^2 = 3$

$a_4 = 4(3) + 1^2 = 13$

$a_5 = 5(13) + 3^2 = 74$

20. a.) Where n is years after 2017:

$a_n = a_{n-1} + (7.6).0112$, $a_0 = 7.6$

b.) $f(n) = 7.6 + (7.6).0112n$

c.) $50 - 17 = 33$

$f(33) = 7.6 + (7.6).0112(33)$

$= 7.6 + 2.81$

$= 10.41$ billion

25d $a_n = 2(a_{n-1})$, $a_0 = 3$ for $n = 1, 2, 3, 4 \ldots$

$a_7 = 2(192) = 384$

$a_8 = 2(384) = 768$

$a_9 = 2(768) = 1536$

33b. **78**

		total
$i = 0$		
$j = 0$	0	0
$j = 1$	3	3
$j = 2$	6	9
$j = 3$	9	18
$i = 1$		
$j = 0$	2	20
$j = 1$	5	25
$j = 2$	8	33
$j = 3$	11	44
$i = 2$		
$j = 0$	4	48
$j = 1$	7	55
$j = 2$	10	65
$j = 3$	13	78