Q. 10th term of AP

AP $\{2, 7, 12 \ldots\}$

$a = 2 \quad d = 7 - 2 = 5$

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

$a_{10} = 2 + (10-1)5$

$a_{10} = 2 + 9 \times 5$

$a_{10} = 47$

Q. 30th term of AP

AP $\{10, 7, 4 \ldots\}$

$a = 10 \quad d = -3$

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

$a_{30} = 10 + (30-1)-3$

$a_{30} = 10 + 29 \times -3$

$a_{30} = -77$

Q.4 which term of the AP $\{3, 8, 13, 18 \ldots 78\}$

$a = 3 \quad d = 5$

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

$78 = 3 + (n-1)5$

$78 = 3 + 5n - 5$

$78 = 5n - 2$

$80 = 5n$

$16 = n$

16th term

5. (i) 7, 13, 19, ... 205

$a = 7 \quad d = 6$

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

$205 = 7 + (n-1)6$

$205 = 7 + 6n - 6$

$205 = 6n + 1$

$204 = 6n$

$34 = n$

(ii) $18, 8\frac{1}{2}, 13 \ldots$

$a = 18 \quad d = -5/2$

$a_n = a + (n-1)2$

$-47 = 18 + (n-1)-5/2$

$-47 = 18 + -5/2n + 5/2$

$-47 = -5/2n + 41/2$

$135/2 = 5/2n$

$27 = n$

1.

	a	d	n	a_n
(i)	7	3	8	28
(ii)	-18	2	10	0
(iii)	46	-3	18	-5
(iv)	-18.9	2.5	10	3.6
(v)	3.5	0	105	3.5

2. (i) $\{-3, -1/2, 2, \ldots\}$

$a = -3 \quad d =$

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

$a_{11} = -3 + 10 \times \frac{5}{2}$

$a_{11} = -3 + 25$

$a_{11} = 22$

3. (i) $2, \underline{14}, 26$

(ii) $\underline{18}, 13, \underline{8}, 3$

(iii) $5, \underline{13/2}, \underline{8}, 19/2$

(iv) $-4, \underline{-2}, \underline{0}, \underline{2}, \underline{4}, 6$

(v) $\underline{53}, 38, \underline{23}, \underline{8}, \underline{-7}, -22$