(8) 21, 42, 63, 84, ...

$a = 21$, $d = 42 - 21 = 21$

$a_n = 210$

$a + (n-1)d = 210$

$21 + (n-1)21 = 210$

$(\div 21)$

$1 + n - 1 = 10$

$\Rightarrow n = 10$ (B)

(9) $a_{18} - a_{13}$

$= a + 17d - a - 12d$

$= 5d$

$= 5 \times 5$

$= 25$ (C)

(10) $a_{18} - a_{14} = 32$

$\Rightarrow a + 17d - a - 13d = 32$

$\Rightarrow 4d = 32$

$\Rightarrow d = 8$ (A)

(11)

I AP	II AP
$a = -1$	$a' = -8$
$d = d$	$d' = d$

$a_4 - a'_4$

$= -1 + 3d - (-8) - 3d$

$= -1 + 8$

$= 7$ (C)

(12) $7a_7 = 11a_{11}$

$\Rightarrow 7(a + 6d) = 11(a + 10d)$

$\Rightarrow 7a + 42d = 11a + 110d$

$\Rightarrow 4a + 68 = 0$

$(\div 4)$ $a + 17d = 0$

$\Rightarrow a_{18} = 0$ (D)

(13) 49, 46, 43, ...

$a = 49$, $d = 46 - 49 = -3$

$a_4 = a + 3d$

$= 49 + 3(-3)$

$= 49 - 9$

$= 40$ (B)

(14) guess (C)

(15) $a = -5$, $d = 2$

$S_6 = \frac{6}{2}[2(-5) + 5 \times 2]$

$= 3(-10 + 10)$

$= 3 \times 0$

$= 0$ (A)

(16) 10, 6, 2, ...

$a = 10$, $d = 6 - 10 = -4$

$S_{16} = \frac{16}{2}[2 \times 10 + 15(-4)]$

$= 8[20 - 60]$

$= 8 \times (-40)$

$= -320$ (A)

(17) $a = 1$, $a_n = 20$, $S_n = 399$

$S_n = 399$

$\frac{n}{2}[a + a_n] = 399$

$\frac{n}{2}[1 + 20] = 399$

$\Rightarrow n = \frac{399 \times 2}{21}$

$\Rightarrow n = 19 \times 2$

$= 38$ (C)

(18) 3, 6, 9, ...

$a = 3$, $d = 3$

$S_5 = \frac{5}{2}[2 \times 3 + 4 \times 3]$

$= \frac{5}{2} \times 6 \times 3$

$= 45$ (A)