1. The t_{12} of an A.P. is 106 and the t_{15} is 133 . Find t_5 .

   (i) 45 (ii) 44 (iii) 41 (iv) 43 (v) 42

2. The t_9 of an A.P. is $\frac{61}{35}$ and the t_{16} is $\frac{22}{7}$. Find t_{17} .

   (i) $\frac{117}{35}$ (ii) $\frac{17}{5}$ (iii) $\frac{117}{37}$ (iv) $\frac{23}{7}$ (v) $\frac{39}{11}$

3. Find the sum of first 71 natural numbers

   (i) 2556 (ii) 2555 (iii) 2559 (iv) 2557 (v) 2553

4. Find the next 4 terms of the following A.P.
   $(-4a-6b),(-a-8b),(2a-10b),...$

   (i) $(-2a-16b),(a-18b),(4a-20b),(7a-22b)$ (ii) $(8a-14b),(11a-16b),(14a-18b),(17a-20b)$

   (iii) $(a-18b),(4a-20b),(7a-22b),(10a-24b)$ (iv) $(5a-12b),(8a-14b),(11a-16b),(14a-18b)$

   (v) $(9a-6b),(12a-8b),(15a-10b),(18a-12b)$

5. Find t_n of the A.P $2,8,14,20,26,...$

   (i) $(6n-4)$ (ii) $(6n-2)$ (iii) $(6n+2)$ (iv) $(5n-4)$ (v) $(9n-4)$

6. Find t_n of the A.P $\frac{2}{7},\frac{19}{42},\frac{13}{21},\frac{11}{14},\frac{20}{21},...$

   (i) $(\frac{1}{6}n+\frac{17}{42})$ (ii) $(\frac{13}{6}n+\frac{5}{42})$ (iii) $(\frac{1}{6}n+\frac{5}{42})$ (iv) $(\frac{1}{6}n+\frac{2}{7})$ (v) $(-\frac{17}{6}n+\frac{5}{42})$

7. The t_7 of an A.P is p and t_8 is q . Find t_{19} and t_n .

   (i) $(-11p+12q),(-pn+8p+qn-7q)$ (ii) $(-11p+12q),(-pn+p+qn-q)$

   (iii) $(-10p+11q),(-pn+8p+qn-7q)$ (iv) $(-4p+6q),(-pn+15p+qn-13q)$

   (v) $(-12p+13q),(-pn+7p+qn-6q)$

8. Determine k so that $(5k+1),(7k+6)$ and
   $(3k+1)$ are the consecutive terms of an A.P

   (i) -1 (ii) $(\frac{-7}{3})$ (iii) -3 (iv) $(\frac{-7}{5})$ (v) $(\frac{-5}{3})$

9. The product of two numbers is 2565 and their arithmetic mean is 51 .
   Find the two numbers.

   (i) (46,58) (ii) (47,57) (iii) (45,56) (iv) (45,57) (v) (59,47)

10. Find the sum of all natural numbers between 1 and 100 which are multiples of 5?

    (i) 948 (ii) 949 (iii) 953 (iv) 951 (v) 950

11. Find the sum of all natural numbers between 100 and 200 which are multiples of 5?

(i) 2851 (ii) 2849 (iii) 2852 (iv) 2850 (v) 2848

12. Find the sum of the following A.P. series
$(9x+3y), (x+9y), (-7x+15y) \ldots$ to 15 terms

(i) $(-705x+675y)$ (ii) $(-594x+582y)$ (iii) $(-814x+630y)$ (iv) $(-610x+594y)$ (v) $(-832x+624y)$

13. Find t_n of the A.P $6, 10, 14, \ldots$

(i) 2 (ii) $(4n+2)$ (iii) $(4n+8)$ (iv) $(7n+2)$ (v) $(4n+6)$

14. If S_{80} and S_{70} of an A.P. are 22760 and 17465 respectively, then $S_{150} =$

(i) 79425 (ii) 79423 (iii) 79426 (iv) 79428

15. If $x \neq y$ and the sequences x, a_1, a_2, y and x, b_1, b_2, y each are in A.P., then $\frac{a_2 - a_1}{b_2 - b_1} =$

(i) $\frac{2}{3}$ (ii) $(\frac{-3}{4})$ (iii) $\frac{4}{3}$ (iv) 1 (v) $\frac{3}{2}$

16. If there are n arithmetic means between a and b, the common difference d =

(i) $\frac{(a+b)}{(n+1)}$ (ii) $\frac{(b-a)}{(n-1)}$ (iii) $\frac{(n-1)}{(a+b)}$ (iv) $\frac{(b-a)}{(n+1)}$ (v) $\frac{(a-b)}{(n+1)}$

17. The sum of first n natural number is

(i) $\frac{(n)(n-1)}{2}$ (ii) $\frac{(n-1)(n+1)}{2}$ (iii) $\frac{n^2(n+1)^2}{4}$ (iv) $\frac{(n)(n+1)(2n+1)}{6}$ (v) $\frac{(n)(n+1)}{2}$

18. The measures of the interior angles of a convex polygon are in A.P.
If the smallest angle is 130 and the largest angle is 158,
then the number of sides of the polygon is

(i) 11 (ii) 10 (iii) 9 (iv) 13 (v) 8

19. If the t_n of an A.P is $(2n+4)$, find S_n

(i) $\frac{(2)(n^2+n)}{2} + 4n$ (ii) $\frac{(7)(n^2+n)}{2} + 6n$ (iii) $\frac{(4)(n^2+n)}{2} + 5n$ (iv) $\frac{(7)(n^2+n)}{2} + 7n$

(v) $\frac{(7)(n^2+n)}{2} + 8n$

20. Determine t_3 and t_n of an A.P. whose t_2 is 9 and t_7 is 44.

(i) $16; (7n-5)$ (ii) $17; (7n-3)$ (iii) $18; (10n-5)$ (iv) $15; (7n+2)$ (v) $14; (6n-5)$

Assignment Key

1) (iv)	2) (i)	3) (i)	4) (iv)	5) (i)	6) (iii)
7) (i)	8) (v)	9) (iv)	10) (v)	11) (iv)	12) (i)
13) (ii)	14) (i)	15) (iv)	16) (iv)	17) (v)	18) (ii)
19) (i)	20) (i)				