Arithmetic Progression Worksheet-3

Question 1

The sum of four consecutive numbers in an AP is 32 and the ratio of the product of the first and the last terms to the product of the two middle terms is 7 : 15. Find the numbers.

Question 2

Find the sum of 3 digit numbers which are not divisible by 7?

Question 3

Find the
(i) sum of those integers between 1 and 500 which are multiples of 2 as well as of 5.
(ii) sum of those integers from 1 to 500 which are multiples of 2 as well as of 5 .
(iii) sum of those integers from 1 to 500 which are multiples of 2 or 5

Question 4

Find the sum of all three digit numbers which leave the remainder 3 when divided by 5

Question 5

In an AP, if $S_n = 3n^2 + 5n$ and $a_k = 164$, find the value of k.

Question 6

If S_n denotes the sum of first n terms of an AP, prove that
$S_{12} = 3(S_8 - S_4)$

Question 7

If the pth, qth & rth term of an AP is x, y and z respectively,
show that x(q-r) + y(r-p) + z(p-q) = 0

Question 8

Find the 20th term from the end of the AP 3, 8, 13........253

Question 9

The sum of the first *n* terms of an AP whose first term is 8 and the common difference is 20 is equal to the sum of first 2*n* terms of another AP whose first term is – 30 and the common difference is 8. Find *n*.

Question 10

Determine *k* so that $k^2 + 4k + 8$, $2k^2 + 3k + 6$, $3k^2 + 4k + 4$ are three consecutive terms of an AP

Answer
1) (2,6,10,14)
2) 424214
4) 99090

5) 27

9) 11

10) k=0