Progreesions

Consider the following lists of numbers :
(i) 1, 2, 3, 4, . . . (ii) 100, 70, 40, 10, . . .
(iii) – 3, –2, –1, 0, . . . (iv) 3, 3, 3, 3, . . .
(v) –1.0, –1.5, –2.0, –2.5, . . .

(i) Which of these are Arithmetic Progressions and why?
(a) 2, 3, 5, 7, 8, 10, 15, ... (b) 2, 5, 7, 10, 12, 15, ...
(c) -1, -3, -5, -7, ...
(ii) Write 3 more Arithmetic Progressions.

1. Think how each of the list given above form an AP. Discuss with your friends
.
2. Find the common difference of each of the above lists? Think when is it positive?

3. Write an arithmetic progression in which the common difference is a small positive
quantity.

4. Make an AP in which the common difference is big(large) positive quantity.

5. Make an AP in which the common difference is negative.

1. Take any Arithmetic Progression.

2. Add a fixed number to each and every term of AP. Write the resulting numbers as a list.

3. Similarly subtract a fixed number from each and every term of AP. Write the resulting
numbers as a list.

4. Multiply or divide each term of AP by a fixed number and write the resulting numbers as
a list.

5. Check whether the resulting lists are AP in each case.

6. What is your conclusion?

7. Check whether, –150 is a term of the AP : 11, 8, 5, 2 . . .
8. Find the 31st term of an AP whose 11th term is 38 and the 16th term is 73.
9. If the 3rd and the 9th terms of an AP are 4 and – 8 respectively, which term of this AP is
zero?
10. The 17th term of an AP exceeds its 10th term by 7. Find the common difference.