

September 26th

In the sequence

a, b, c, d, e, f, g, h, i, j, k, 0, 1, 1, 2, 3, 5, 8, 13, ...

each term is the sum of the two terms to its left.

Each term is also

term 2 to the right – term 1 to the right

Hence:

$$k = 1 - 0 = 1$$

$$j = 0 - 1 = -1$$

$$i = 1 - -1 = 2$$

$$h = -1 - 2 = -3$$

$$g = 2 - -3 = 5$$

....

which mirrors the positive sequence, with alternating positive and negative.

Continuing the sequence gives

$$\mathbf{a = 89}$$