

$$a = 8x^2 + 4xk - 3$$

$$b = 48x^4 + 32x^3k - 32x^2 - 12xk + 4$$

$$c = b + 1$$

$$a + b = (4x^2 + 4xk - 1)^2$$

$$b + c = (8x^2 + 4xk - 3)^2 .$$

Now $\pm\sqrt{2x^2 - 1}$ in integral for 1, 5, 29, 169, \dots , a recurrent series that has already been defined. Substituting alternately the positive and negative values of $\pm\sqrt{2x^2 - 1}$ in a, b, c, we obtain the desired triplets.

Several minor but interesting relationships may be noted in conclusion. Since

$$u = x^2 + (x + y)^2 ,$$

it follows that

$$u = x^2 + (x + k)^2 = 4x^2 + 2xk - 1$$

$$u = l^2 + (l + y)^2 = 2y^2 + 2yl + 1 ,$$

and, since $v = u - 1$,

$$a + b = 2u^2 - 1 ,$$

and

$$u = \sqrt{\frac{1}{2}(a + b + 1)} .$$

