$$x^{2} + y^{2} + z^{2} = 3xyz,$$

$$(1, F_{2n-1}, F_{2n+1}),$$

$$(2, P_{2n-1}, P_{2n+1}),$$

$$m_{n} = \frac{1}{3}e^{C\sqrt{n}+o(1)} \quad \text{with } C = 2.3523414972....$$

$$x^{2} + y^{2} + z^{2} = 3xyz + 4/9$$

$$f(x) + f(y) = f(z)$$

$$L_{n} = \sqrt{9 - \frac{4}{m_{n}^{2}}}.$$

$$f(x, y) = ax^{2} + bxy + cy^{2}$$

$$D = b^{2} - 4ac$$

$$\frac{\sqrt{D}}{3}$$

$$px^{2} + (3p - 2a)xy + (b - 3a)y^{2}$$