1.) evalf(Orb(((1 - x)*(2 - x)*(3 - x))/12, x, 0.5, 1000, 1010), 10);

[0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993, 0.2804250993]

r1 = 6.88 , r2 = 3.33 , r3 = 2.55 , r4 = 2.48277674280244
This was the best approximation for r4.

2.)

T := RT([x, y], 30); SSg(T, [x, y]); ORB(T, [x, y], [100., 200.], 1000, 1010)[-1];

$$T := \begin{bmatrix} 29 + 11x + 20y & 9 + 17x + 26y \\ \hline 25 + 23x + 8y & 18 + 11x + 20y \end{bmatrix}$$

[[0.5532750373, -0.9126574511]]
[1.069877440, 1.075515526]

$$T := \begin{bmatrix} 23 + 13x + 8y & 17 + 23x + 2y \\ \hline 17 + 6x + 20y & 25 + 21x + 9y \end{bmatrix}$$

[[0.05503676534, -3.299145587]]

[1.106322109, 0.7950352790]

$$T := \begin{bmatrix} 11 + 11x + 30y & 24 + 16x + 11y \\ \hline 6 + 8x + 20y & 23 + 9x + 20y \end{bmatrix}$$

[[-1.452981083, 0.2227264123]]
[1.512537664, 1.038976820]

$$T := \begin{bmatrix} 14 + 30x + 20y & 3 + 9x + 13y \\ \hline 16 + 29x + 19y & 3 + 8x + 7y \end{bmatrix}$$

[[-0.6268219224, 0.1933515201]]
[1.006383440, 1.459009550]

$$T := \begin{bmatrix} 27 + 11x + 25y & 13 + 12x + 9y \\ 20 + 30x + 14y & 18 + 21x + 5y \end{bmatrix}$$

$$\begin{bmatrix} -1.145939322, 0.05072354173 \\ 0.9514143582, 0.7464262948 \end{bmatrix}$$

$$T := \begin{bmatrix} 18 + 4x + 17y & 22 + 10x + 5y \\ 29 + 18x + 21y & 21 + x + 13y \end{bmatrix}$$

$$\begin{bmatrix} -2.044168692, 0.1019738841 \\ 0.6113881224, 0.9644715537 \end{bmatrix}$$

3.)

$$T := \begin{bmatrix} 5 + 10x + 3y + 5z & 2 + 8x + 6y + 2z & 2 + 10x + 10y + 9z \\ 9 + 5x + y + 3z & 8 + 5x + 9y + z & 6 + 6x + 10y + 9z \end{bmatrix}$$

$$\begin{bmatrix} 0.6139551655, 0.4843774787, -1.546798218 \\ 1.327211137, 0.8488721623, 1.041129974 \end{bmatrix}$$

$$T := \begin{bmatrix} 6 + 7x + 7y + 2z & 1 + x + 4y + 10z & 3 + 8x + 4y + 3z \\ 2 + 7x + 8y + 3z & 9 + 6x + 9y + 9z & 10 + 10x + 9y + 2z \end{bmatrix}$$

$$\begin{bmatrix} 0.2042499678, -1.329734239, 0.29275959 \\ 1.197326906, 0.3880766651, 0.5972384427 \end{bmatrix}$$

$$T := \begin{bmatrix} 9 + 4x + 2y + 8z & 9 + 5x + y + 2z & 6 + 7x + 4y + 4z \\ 4 + 3x + 9y + 4z & 9 + 9x + 4y + 2z & 4 + 9x + 2y + 9z \end{bmatrix}$$

$$\begin{bmatrix} 0.1888249963, 0.7340366983, -1.257977342 \\ 1.268043397, 0.7115056628, 0.8609702255 \end{bmatrix}$$

$$T := \begin{bmatrix} 5 + 10x + 7y + 9z & 4 + 6x + y + 8z & 3 + 6x + 5y + 7z \\ \hline 2 + 7x + y + 4z & 8 + 5x + 6y + 3z & 9 + x + 9y + 3z \end{bmatrix}$$

$$\begin{bmatrix} 1.877839611 & 11.52366132 & -36.51972956 \\ 1.962645110 & 0.9684721849 & 1.204200682 \end{bmatrix}$$

$$T := \begin{bmatrix} 4 + 6x + 7y + 5z & 10 + 3x + 6y + 5z & 3 + 4x + 7y + 7z \\ \hline 2 + 10x + 5y + 2z & 9 + x + 4y + 10z & 1 + 7x + y + 2z \end{bmatrix}$$

$$\begin{bmatrix} 1.209277548 & -93.940429 & 36.944078 \\ 1.209957650 & 0.8633759381 & 1.930074074 \end{bmatrix}$$

$$T := \begin{bmatrix} 1 + 4x + 7y + 9z & 8 + 3x + 3y + 2z & 4 + 3x + 10y + z \\ \hline 8 + 9x + 6y + 7z & 2 + x + 3y + 5z & 8 + 3x + 8y + 8z \end{bmatrix}$$

$$\begin{bmatrix} -2.196782139 & 0.9836751024 & 0.565862225 \\ 0.7341396111 & 1.469087218 & 0.7704402599 \end{bmatrix}$$

$$T := \begin{bmatrix} 7 + 5x + 6y + 7z & 6 + 4x + 10y + 10z & 10 + 9x + 5y + 5z \\ \hline 1 + 5x + 6y + 6z & 5 + 9x + 9y + 5z & 2 + 4x + 9y + 10z \end{bmatrix}$$

$$\begin{bmatrix} -1.189670387 & -0.627019387 & 0.9246734834 \\ 1.342435875 & 1.035927502 & 1.166909602 \end{bmatrix}$$

I noticed that the incorrect answers for SSg for problems with 3 variables came in groups. Meaning, Maple would give 4 wrong answers in a row and then 4 right answers in a row. I don't know if this is related, but that might be a factor.