6.1) $M_{TG}^2 = \dfrac{M_{Pl}^2}{(M_{TG} R)^n}$, $M_{Pl} \sim 10^{16}$ TeV

If $M_{TG} \sim 13$ TeV , then the LHC could be able to detect gravitons escaping into extra dimensions

$R^n = M_{Pl}^2 (M_{TG})^{-(n+2)}$

$R = \dfrac{1}{M_{TG}} \left(\dfrac{M_{Pl}}{M_{TG}} \right)^{2/n}$

$\sim \dfrac{1}{13 \text{ TeV}} \left(\dfrac{10^{16}}{13} \right)^{2/n}$

$= 0.0769 (\text{TeV})^{-1} \cdot (7.69 \times 10^{14})^{2/n}$

$R = 0.0769 \cdot (5.91 \times 10^{29})^{1/n} \text{ TeV}^{-1}$

Converting $1 \text{ TeV}^{-1} = 2 \cdot 10^{-17}$ cm

$R = (1.53 \cdot 10^{-17})(5.91 \times 10^{29})^{1/n}$ cm

$\boxed{n = 1 : \; R \sim 10^{13} \text{ cm}}$

* The existence of this large dimension would have noticeable effects on Newtonian gravity at the solar system scale which have not been detected.

$\boxed{n = 2 : \; R \sim 0.0117 \text{ cm} = 117 \; \mu m}$

*The size of these dimensions already pushes at the limit of our most sensitive tests of gravity on small scales