

$$\int_0^1 \int_0^{1-\sqrt{1-z}} \int_0^{\sqrt{1-z}} 1 \, dx \, dy \, dz + \int_0^1 \int_{1-\sqrt{1-z}}^1 \int_0^{1-y} 1 \, dx \, dy \, dz$$

$$\frac{5}{12} \tag{1}$$

$$\int_0^1 \int_0^{1-x^2} \int_0^{1-x} 1 \, dy \, dz \, dx$$

$$\frac{5}{12} \tag{2}$$

$$\int_0^1 \int_0^{1-x} \int_0^{1-x^2} 1 \, dz \, dy \, dx$$

$$\frac{5}{12} \tag{3}$$

$$\int_0^1 \int_0^{1-y} \int_0^{1-x^2} 1 \, dz \, dx \, dy$$

$$\frac{5}{12} \tag{4}$$

$$\int_0^1 \int_0^{\sqrt{1-z}} \int_0^{1-x} 1 \, dy \, dx \, dz$$

$$\frac{5}{12} \tag{5}$$

$$\int_0^1 \int_{1-(1-y)^2}^1 \int_0^{\sqrt{1-z}} 1 \, dx \, dz \, dy + \int_0^1 \int_0^{1-(1-y)^2} \int_0^{1-y} 1 \, dx \, dz \, dy$$

$$\frac{5}{12} \tag{6}$$