

$$\frac{\int_0^9 \int_0^{81-x^2} \int_0^{81-x^2} x \cdot z \, dz \, dy \, dx}{\int_0^9 \int_0^{81-x^2} \int_0^{81-x^2} 1 \, dz \, dy \, dx}$$

10935

128

(1)

unwith(VectorCalculus):
unwith(codegen):

$$\frac{\int_0^2 \int_0^{4-x^2} \int_0^{4-x^2} x \cdot z \, dz \, dy \, dx}{\int_0^2 \int_0^{4-x^2} \int_0^{4-x^2} 1 \, dz \, dy \, dx}$$

15

16

(2)

$$solve\left(\frac{\mathrm{d}}{\mathrm{d} x}\left(2\,x\cdot\frac{350-4\,x}{3}\right)=0\right)$$

175

4

(3)

$$\frac{\mathrm{d}}{\mathrm{d} x}\left(\frac{700}{3}x-\frac{8}{3}x^2\right)$$

700

3

-

16

x

3

(4)

$$\lim_{x \rightarrow \text{infinity}}\left(\frac{700}{3}-\frac{16\,x}{3}\right)$$

-

∞

(5)

$$\lim_{x \rightarrow -\text{infinity}}\left(\frac{700}{3}-\frac{16\,x}{3}\right)$$

∞

(6)

$$\frac{350-4\left(\frac{175}{4}\right)}{3}$$

175

3

(7)

$$9\cdot 10^6\int_0^1\int_0^{1-y}\int_0^{1-y}x\cdot y^3\cdot (9-z)\,dx\,dy\,dz$$

637500

(8)

$$9\cdot 10^6\int_0^1\int_0^{1-x}\int_0^1x\cdot y^3\cdot (9-z)\,dz\,dy\,dx$$

$$637500 \tag{9}$$

$$\frac{\int_0^1\int_0^{1-x}\int_0^1z\cdot x\cdot y^3\cdot (9-z)\,\mathrm{d}z\,\mathrm{d}y\,\mathrm{d}x}{\int_0^1\int_0^{1-x}\int_0^1x\cdot y^3\cdot (9-z)\,\mathrm{d}z\,\mathrm{d}y\,\mathrm{d}x}$$

$$\frac{25}{51} \tag{10}$$

$$\frac{\partial}{\partial x}(x\cdot y\cdot \mathrm{e}^{\sin(6\,x+5\,y)})$$

$$y\,\mathrm{e}^{\sin(6\,x+5\,y)}+6\,x\,y\cos(6\,x+5\,y)\,\mathrm{e}^{\sin(6\,x+5\,y)} \tag{11}$$

$$\frac{\partial}{\partial y}(x\cdot y\cdot \mathrm{e}^{\sin(6\,x+5\,y)})$$

$$x\,\mathrm{e}^{\sin(6\,x+5\,y)}+5\,x\,y\cos(6\,x+5\,y)\,\mathrm{e}^{\sin(6\,x+5\,y)} \tag{12}$$

$$\frac{\partial}{\partial z}(x\cdot y\cdot \mathrm{e}^{\sin(6\,x+5\,y)})$$

$$0 \tag{13}$$

$$\int_{-3}^3\int_1^9\int_1^e\frac{x\cdot z^2}{y}\mathrm{d}y\,\mathrm{d}x\,\mathrm{d}z$$

$$720 \tag{14}$$

$$\int_0^8\int_0^4\int_0^{\sqrt{16-x^2}}\frac{x}{z+1}\,\mathrm{d}y\,\mathrm{d}x\,\mathrm{d}z$$

$$\frac{128\ln(3)}{3} \tag{15}$$

$$\int_0^3\int_0^{\sqrt{9-x^2}}\int_0^{\sqrt{9-x^2}}1\,\mathrm{d}z\,\mathrm{d}y\,\mathrm{d}x$$

$$18 \tag{16}$$

$$diff\left(2\,w\cdot\left(\frac{350-4\,w}{3}\right),w\right)$$

$$\frac{700}{3}-\frac{16\,w}{3} \tag{17}$$

$$9\cdot 10^6\int_0^1\int_0^{1-x}\int_0^1x\cdot y^3\cdot (9-z)\,\mathrm{d}z\,\mathrm{d}y\,\mathrm{d}x$$

$$637500 \tag{18}$$

$$\frac{\int_0^1 \int_0^{1-x} \int_0^1 z \cdot x \cdot y^3 \cdot (9-z) \, dz \, dy \, dx}{\int_0^1 \int_0^{1-x} \int_0^1 x \cdot y^3 \cdot (9-z) \, dz \, dy \, dx} = \frac{25}{51} \tag{19}$$

$$4 \cdot 10^6 \int_0^1 \int_0^{1-x} \int_0^1 x \cdot y^3 \cdot (9-z) \, dz \, dy \, dx = \frac{850000}{3} \tag{20}$$

$$\frac{\int_0^1 \int_0^{1-x} \int_0^1 z \cdot x \cdot y^3 \cdot (9-z) \, dz \, dy \, dx}{\int_0^1 \int_0^{1-x} \int_0^1 x \cdot y^3 \cdot (9-z) \, dz \, dy \, dx} = \frac{25}{51} \tag{21}$$