

35. $\int_0^1 \int_0^1 \frac{1}{\sqrt{1+x^2+y^2}} dx dy = \ln(1+\sqrt{2})$

33. $\int_0^1 \int_0^1 \frac{1}{\sqrt{1+x^2+y^2}} dx dy = \frac{1}{2} \left(\frac{1}{\sqrt{2}} - \frac{1}{\sqrt{1+2}} \right) = \frac{1}{2} \left(\frac{1}{\sqrt{2}} - \frac{1}{\sqrt{3}} \right)$

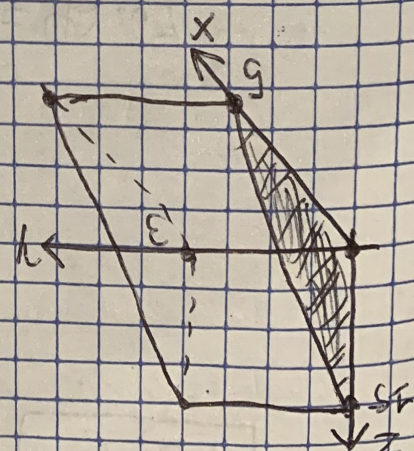
31. $\int_0^1 \int_0^1 \frac{1}{\sqrt{1+x^2+y^2}} dx dy = 1.317$

25. $\int_0^1 \int_0^1 x^2 y^2 dx dy = \frac{1}{84}$

23. $\int_0^1 \int_0^1 x^2 y^2 dx dy = \frac{1}{4}$

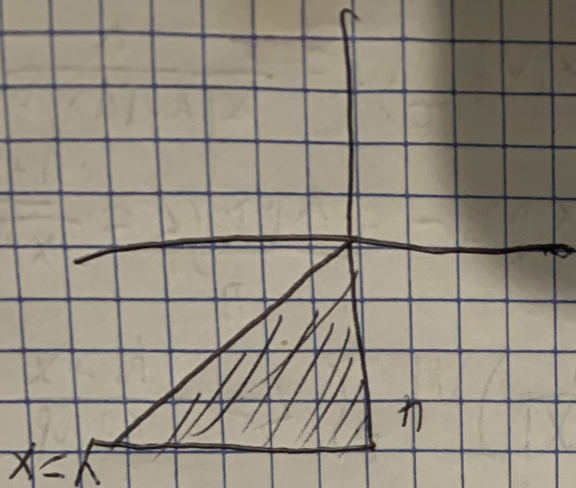
21. $\int_0^1 \int_0^1 1 dx dy = 55$

15. $\int_0^1 \int_0^1 x^3 dy dx = 0$



15. $\int_0^1 \int_0^1 (3x+2y) dx dy = \frac{1}{2}$

where $R = [0, 5] \times [0, 3]$



$$25. \int_0^a \int_0^a f(x,y) dx dy = \int_0^a \int_0^a f(x,y) dy dx$$

$$26. \int_0^a \int_0^a x y dx dy = 0$$

$$29. \int_0^1 \int_0^1 x y dx dy = \int_0^1 (1/2 x^2 y) dy = \int_0^1 (1/2 y) dy = 1/4$$

$$21. \int_0^1 \int_0^1 x dx = \int_0^1 (1/2 x^2) dx = 1/6$$

$$7. \int_0^1 \int_0^1 x y dx dy = 1/4$$

$$5. \int_0^1 \int_0^1 x^2 y dx dy = \int_0^1 (1/3 x^3 y) dy = \int_0^1 (1/6 y) dy = 1/12$$

$$3. \int_0^1 \int_0^1 x^2 y dx dy = \int_0^1 (1/3 x^3 y) dy = \int_0^1 (1/6 y) dy = 1/12$$

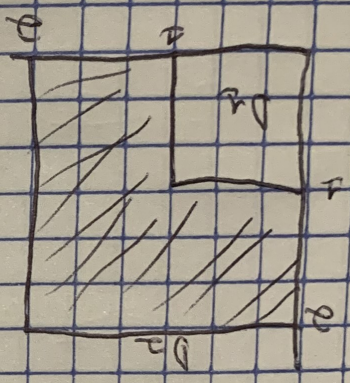
25. a

$$41. \int_0^1 \int_0^1 x^2 y dx dy = \int_0^1 (1/3 x^3 y) dy = \int_0^1 (1/6 y) dy = 1/12$$

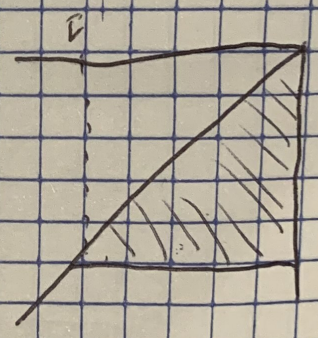
$$37. \int_0^1 \int_0^1 x^2 y dx dy = \int_0^1 (1/3 x^3 y) dy = \int_0^1 (1/6 y) dy = 1/12$$

41. $\int_0^a \int_{\sqrt{a^2-x^2}}^a e^{y^2+x^2} - (e^{y^2-x^2} - 8) dy dx$

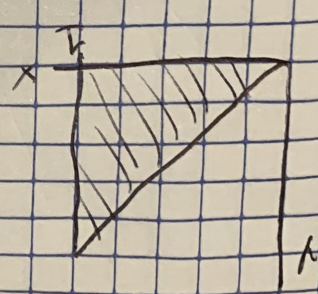
43. $\int_{\pi/2}^{\pi} \int_0^x \sin y dy dx = \cos \pi - \cos \frac{\pi}{2}$



37. $\iint_D e^{x+y} dy dx = e^2 + 2e + 1$



35. $\int_0^1 \int_0^{1-y} x e^{xy} dx dy = \frac{e}{1-e}$



33. $\int_0^1 \int_0^{1-x} x \sin x dy dx = 1 - \cos 1$

31. $\int_0^1 \int_0^x (xy)^x dx dy = e - a$