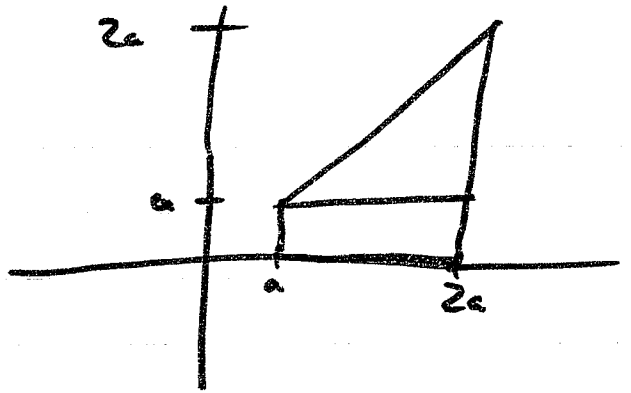
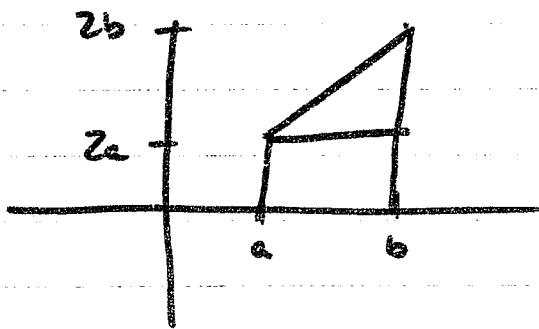


27)  $\int_a^{2a} x \, dx, a > 0$

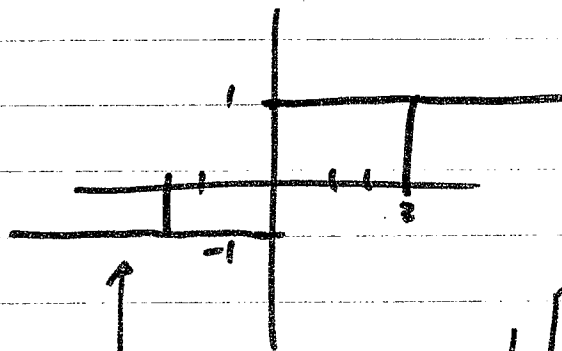


25)  $\int_a^b z \, ds$  where  $a < b$

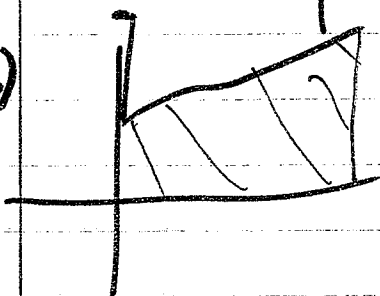


39)  $\int_{-3}^4 \frac{x^2-1}{x+1} \, dx = \int_{-3}^4 (x-1) \, dx$

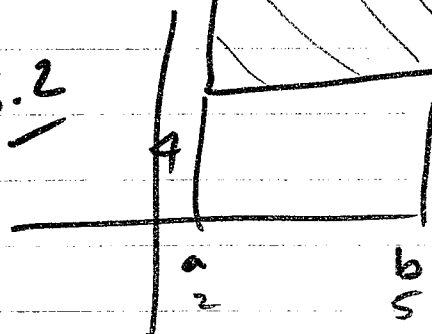
37)  $\int_{-2}^2 \frac{x}{|x|} \, dx$



43)



S.2



S.3

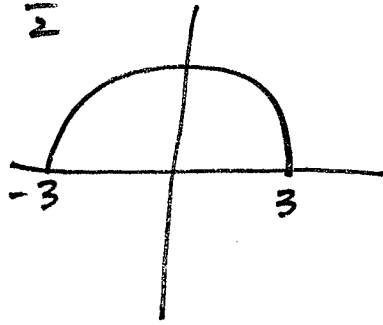
$\int_2^5 (f(x) + 4) \, dx$

$\int_2^5 f(x) \, dx +$

$\int_2^5 4 \, dx$

15)  $\int_{-3}^3 \sqrt{9-x^2} dx = \frac{9\pi}{2}$

$$\pi(3)^2 = 9\pi$$



$$y = \sqrt{9-x^2}$$
$$y^2 = 9-x^2$$
$$x^2 + y^2 = 9$$

4.2

43)  $a(t) = -1.6$

$$v(t) = -1.6t + C$$

$$v(t) = -1.6t \quad v(30) = -1.6(30)$$

$$s(t) = -.8t^2 + C$$

$$s(t) = -.8t^2$$

$$s(30) = ~~0~~ = -.8(30)^2$$

36)  $f'(x) = \frac{1}{4x^{3/4}}$ ,  $(1, -2)$

$$f'(x) = \frac{1}{4}x^{-3/4}$$

$$f(x) = x^{1/4} + C \rightarrow f(x) = x^{1/4} - 3$$

$$-2 = (1)^{1/4} + C$$

$$-3 = C$$

37)  $f'(x) = \frac{1}{x+2}$   $P(-1, 3)$   
 $= (x+2)^{-1}$

$$\frac{d}{dx} \ln x = \frac{1}{x}$$
$$\frac{d}{dx} \ln(x+2) = \frac{1}{x+2}$$

$$f(x) = \ln(x+2) + C$$

$$3 = \ln(-1+2) + C$$

$$3 = 0 + C$$

$$3 = C$$

$$f(x) = \ln(x+2) + 3$$