2 ㉮ $f(-x)=f(x)$ → 우함수

㉯ $f(x+2)=f(x)$ → 2차주기

㉰ $\int_{-1}^{1} 2x f(x)\,dx + \int_{1}^{3} f(x)\,dx = 15$

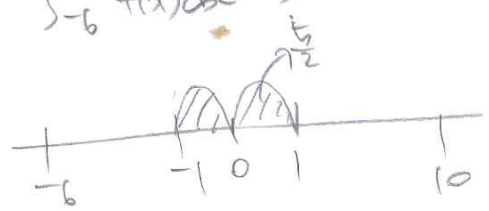
기함수 = 기 → 0

$3\int_{-1}^{1} f(x)\,dx = 15$

$\int_{-6}^{10} f(x)\,dx = ?$

$6\int_{0}^{1} f(x)\,dx = 15$

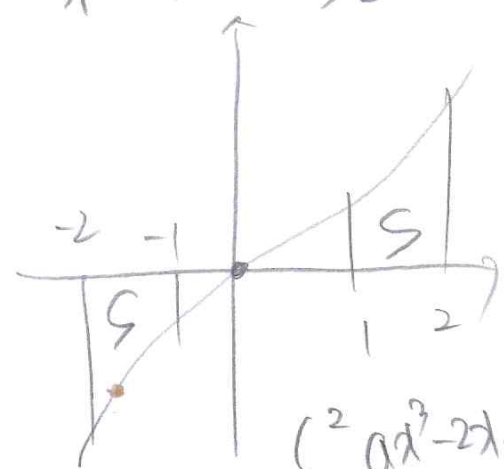
$\int_{0}^{1} f(x)\,dx = \frac{5}{2}$



$\frac{5}{2}\times 16 = 40$ 답) 40

4. $f(x)=ax^3-2x$ → 기함수

$\int_{1}^{2} f(x)\,dx - \int_{-2}^{-1} f(x)\,dx = 24$ $a=?$



넓이조정

$S+S=24$

$S=12$

$\int_{1}^{2} ax^3-2x\,dx = 12$ ∴ $a=4$

답) 4

3. 삼차함수 $f(x)$

$f'(-x)=f'(x)$ → 우함수

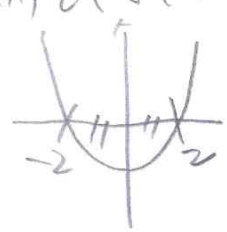
$f'(1)=-9$ $f(3)=?$

$\lim_{x\to 2} \frac{f(x)-4}{x-2} = 0$

↳ ① $f(2)=4$

② $f'(2)=0$

$f'(x)$는 우함수



$f'(x)=k(x+2)(x-2)$

$=k(x^2-4)$

$f'(1)=-9$ 이므로 $k=3$

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

$f(2)=4$ 이므로 $C=20$

$f(x)=x^3-12x+20$

$f(3)=11$

답 ①