

$$\textcircled{21} \quad w = x^2 y$$

$$\frac{dx}{dt} = -1$$

$$\frac{dw}{dt} = \frac{d}{dt}(x^2) \cdot y + x^2 \cdot \frac{dy}{dt}$$

$$\frac{dy}{dt} = 4$$

$$= 2x \frac{dx}{dt} \cdot y + x^2 \frac{dy}{dt}$$

$$x = 6$$

$$= 12(-1)(20) + 36(4)$$

$$y = 20$$

$$= -240 + 144 = -96$$

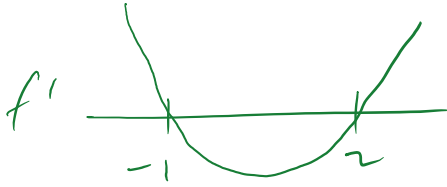
$\textcircled{C}$

$(22)$   $f(x) = 2x^3 - 3x^2 - 12x + 18$

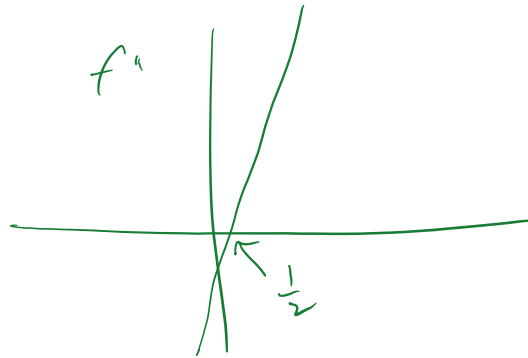
$f'(x) = 6x^2 - 6x - 12 = 0$

$6(x^2 - x - 2) = 0$

$6(x-2)(x+1) = 0$



$f'' = 12x - 6 = 0 \quad x = 1/2$



(D)