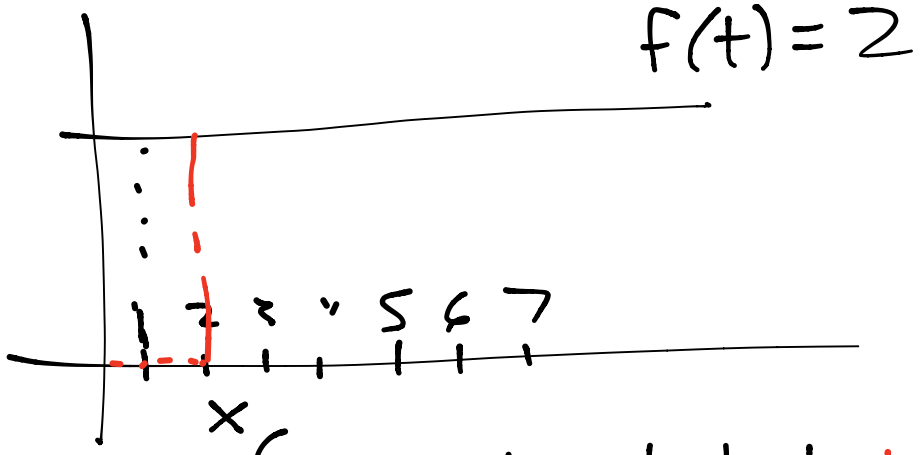
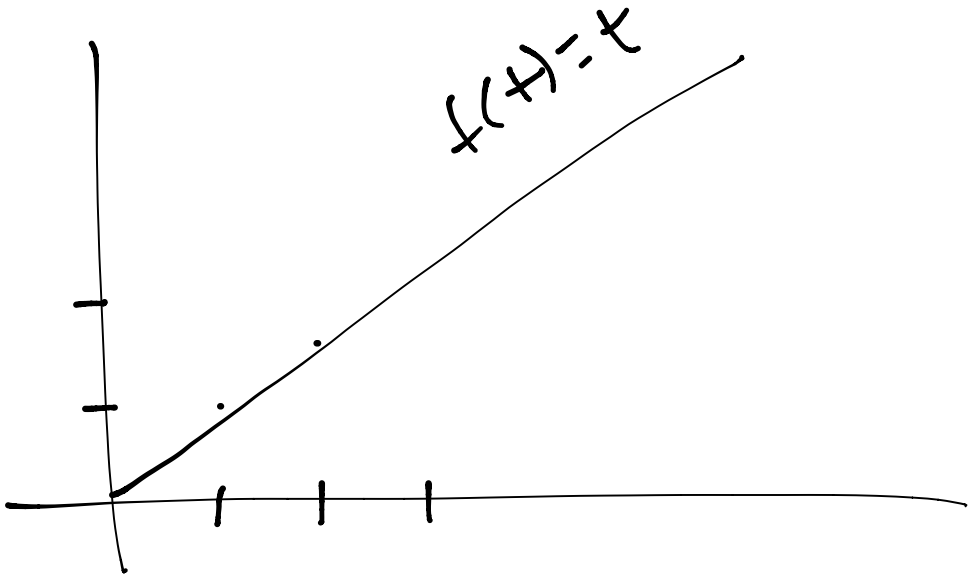


$$\int_0^x f(t)\,dt$$

x	0	1	2	3	4	5
	0	2	4	6	8	10



x	0	1	2	3	4	5	6
$\int_0^x f(t)\,dt$	0	$\frac{1}{2}$	2	4.5	8	$\frac{25}{2}$	18

ξx

x	0	1	2	3	4	5	6	6.5	7	8
f(t)	0	2	5	6.5	4.5	2.5	3	3.25	3	2

$$F(x) = \int_0^x f(t)\,dt$$

$$\int x\,dx = \frac{x^2}{2} + C$$

$$\frac{d}{dx}\left(\frac{x^2}{2} + C\right) = x$$

$$\frac{d}{dx}\int x\,dx = x$$

$$F(x) = \int_0^x f(t)\,dt$$

$$F'(x) = \frac{d}{dx}\int_0^x f(t)\,dt$$

$$F'(x) = f(x)$$

x	0	1	2	3	4	5	6	6.5	7	8
$F'(x)$	1	3	3	0	-4	0	1	0	-1	-1

$F(x)$ is increasing when $F'(x) > 0$. This occurs on

$(0,3) \cup (5,6.5)$.

$F(x)$ has a max @ $x=3$ & a min @ $x=0$.

$F'(x)$ is inc $(0,1) \cup (4,6)$ $\therefore$

$F(x)$ is CCU (concave up) on $(0,1) \cup (4,6)$.

$F'(x)$ is dec on $(2,4) \cup (6,7)$ $\therefore$

$F(x)$ is CCD (concave down) on $(2,4) \cup (6,7)$.

HW – Finish Ex 2 in packet from Friday. Video, if needed.

– Error Analysis of Test

- due Friday (can be flexible)