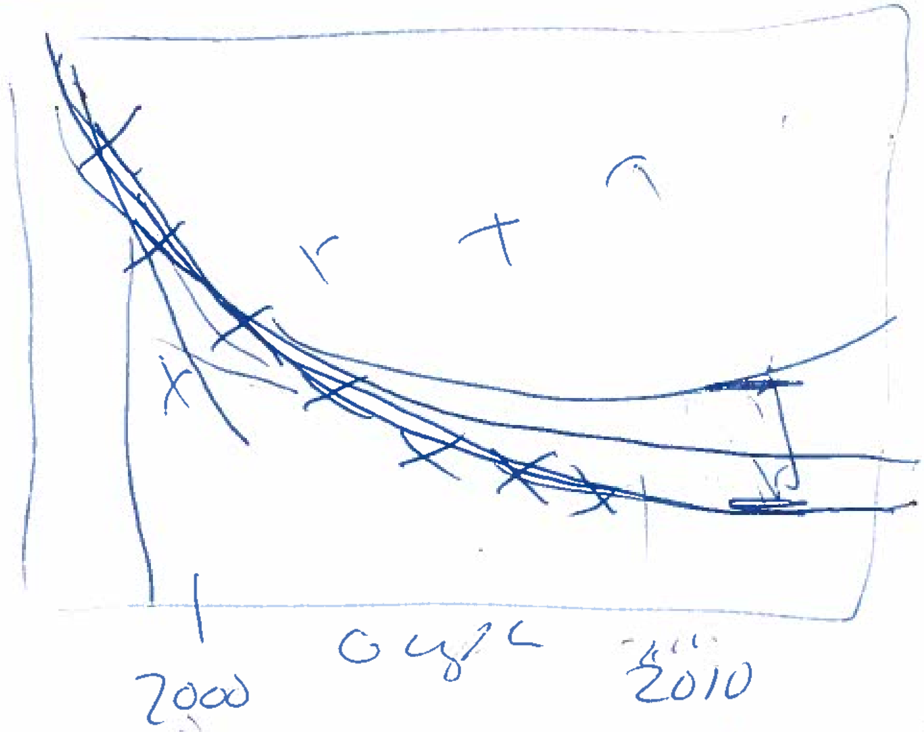
Whale Population

151
R

Yrs	Pop

Intro



Reg.
1. Exp.
2. Cub

Future Predict
Limit
Bet

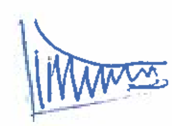
$\lim_{x \to \infty} f(x) = 0$ and

$\lim_{x \to 2020} f(x) = 1 - 5$

Deriv
Rate of Change

$\frac{dy}{dx} = -10$ whales/day

Integral



$\int f(x)dx =$

$\frac{100}{10} =$

10 whales
on Ave

Conclusion

There's an ave of 10 whales ~~per year~~...
of 10 whales / day
Dropping rate of
Expected ~~2020~~ you then be 4 → 5

Area Under Curve

$$\int_a^b f(x)\,dx \equiv$$ Area under curve $f(x)$ from a to b.

Definite Integral

Ex $$\int_{-2}^{2} \sqrt{4-x^2}\,dx = 2\pi$$

$y = \sqrt{4-x^2}$

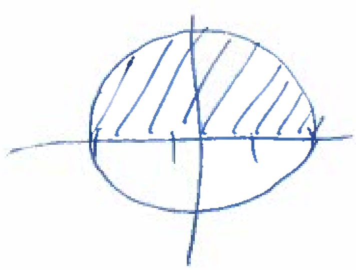
$y^2 = 4-x^2$

$x^2+y^2=4$

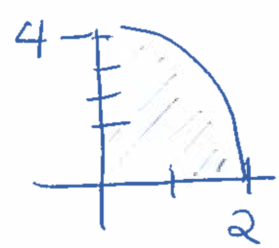
$r=2$

$A = \pi r^2$

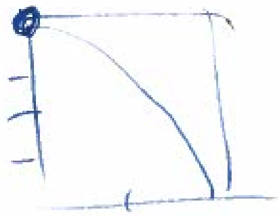
$A(2) = 4\pi$



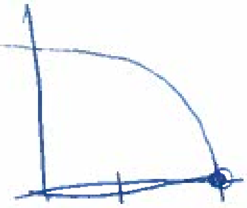
Ex $$\int_0^2 4-x^2\,dx$$



LEFT RIGHT



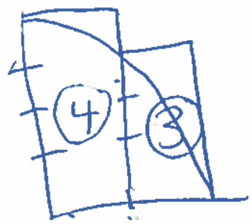
$4-x^2$



Width $= \dfrac{b-a}{n} = \Delta x$

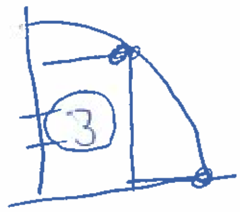
$n=1$ $\Delta x = 2$ $n=1$

$A \approx 8$ $A \approx 0$



$4-x^2$

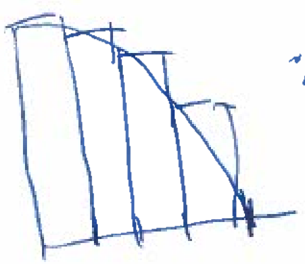
$\Delta x = 1$



$n=1$

$A \approx 7$ $A \approx 3$

$[f(0)+f(1)](\text{width})$ $[f(1)+f(2)]\,\text{width}$



$\Delta x = \dfrac{2-0}{4}$

$= .5$

$n=4$ $n=4$

$A \approx 4.25$

$A \approx 6.25$

$[f(0)+f(1/2)+f(1)+f(1.5)](.5)$

$[4 + 3.75 \quad 3 \quad 1.75]\,.5$

list $\boxed{2^{nd}}$ $\boxed{\text{Stat}}$

sum list (>) (>) 5: sum

seq List (>) 5: seq

$\text{sum}(\text{seq}(\underset{f(x)}{4-x^2}, \underset{x}{X}, \underset{\substack{a \\ 1^{st}}}{0}, \underset{b-\Delta x}{1.5}, \underset{\Delta X}{.5})) \cdot \underset{\Delta X}{.5}$

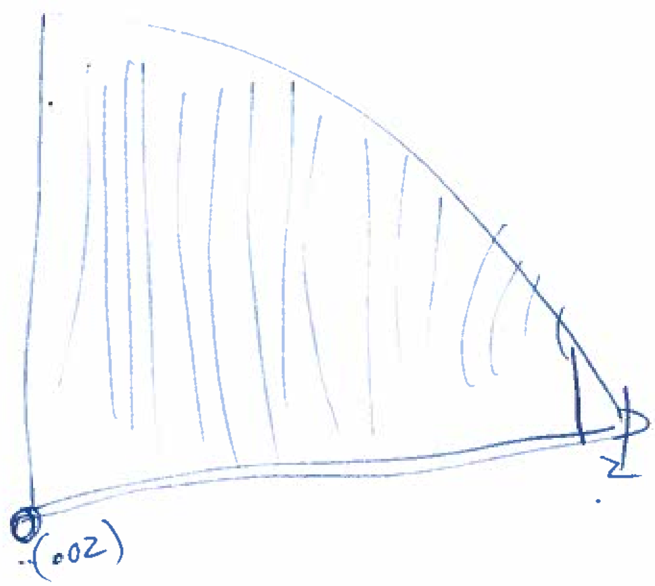
last

Left

$4 - .5 = 3.5$

$f(x) = 4 - x^2$

$n = 100 \qquad \Delta X = \dfrac{2-0}{100} = .02$

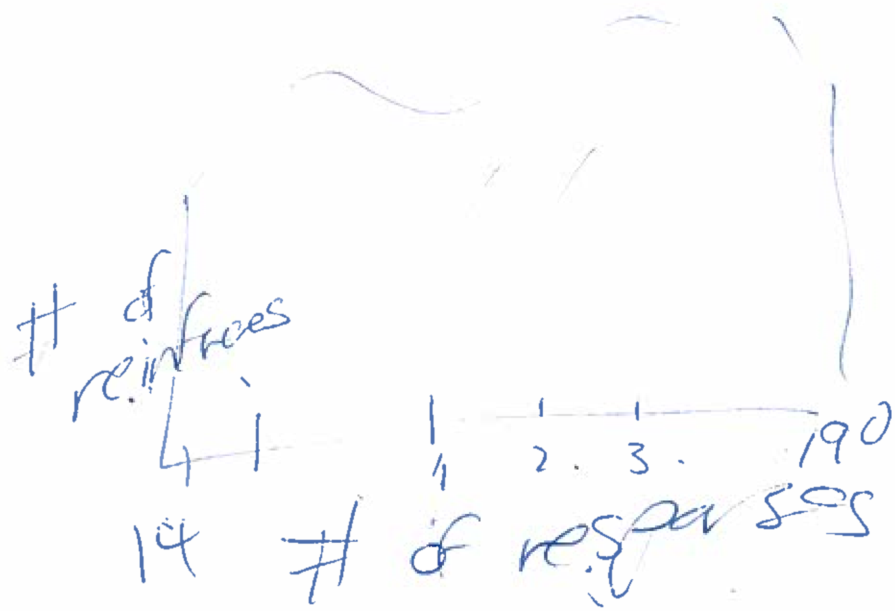


$\text{Sum}(\text{seq}(Y_1, X, 0, 1.98, .02)) * .02$

$= 5.37$

$2 - .02$

$b - \Delta X$



$$\frac{\text{Area}}{190-14} = \text{Aver. \# of reinforc}$$

GROUP NAME: Hodge Podge

Date: 4/10

Student Names (First and Last)

Speaker/Presenter: [illegible]

Writer/Prep: Corrina Hansen

Leader/Collaborator: [illegible]

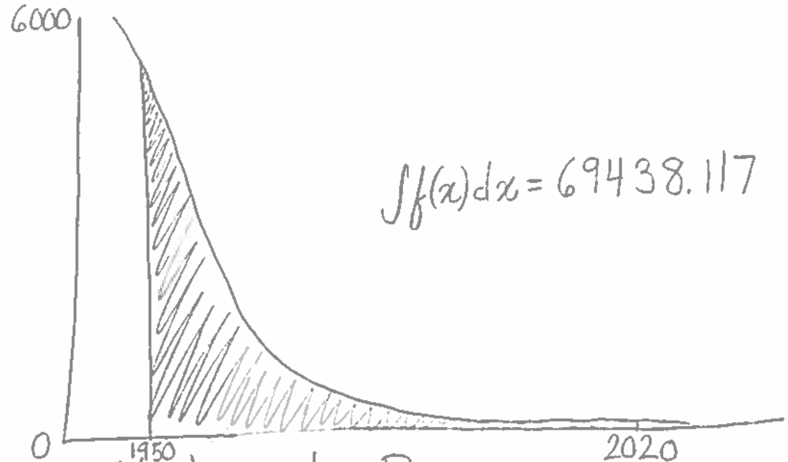
Independant Variable (x-axis): Years CE

Dependant Variable (y-axis): Estimated Population of Baiji

Conclusion (in words): According to a logistic regression, the average population of dolphins was about 1017 for the years 1950 to 2020.

Supporting Work:

L_1	L_2
1950	5000
1981	400
1986	300
1990	200
1991	120
1999	50
2003	24



$\int f(x)dx = 69438.117$

Y_1: Logistic Regression

If $n=100$

$\text{sum}(\text{seq}(Y_1, X, 1950, 2019.3, .7)) * .7 = 71195.05652$

$$\frac{71195.05652}{(2020-1950)} = 1017.072236$$

GROUP NAME: El Business Date: 4/10/14	Student Names (First and Last) Speaker/Presenter: Ryan Writer/Prep: Brittany Leader/Collaborator: MATH
Independant Variable (x-axis): years (world cup) Dependant Variable (y-axis): goals (scored)	

Conclusion (in words): The area equals approximately 151.71; So approximately 151 goals were scored between year one and year five.

Supporting Work:

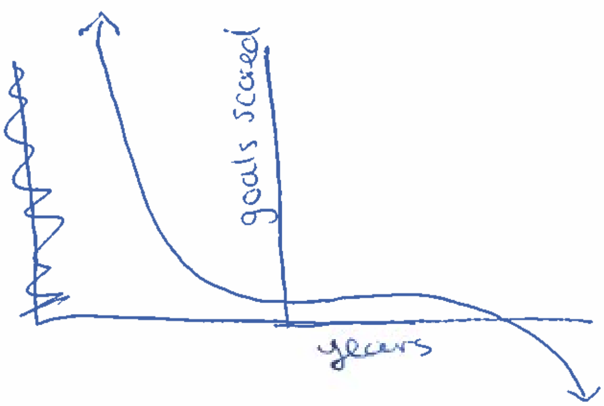
Y_1 = cubic regression

$\text{sum}(\text{seq}(Y_1, x, 1, 4.8, .2))*.2$

$\boxed{=}$ 151.7142857

≈ 151.71

area is approximately 151.71



2nd calc 7:

Lower 1:

Upper 5:

$\int f(x)dx = 152.49524$