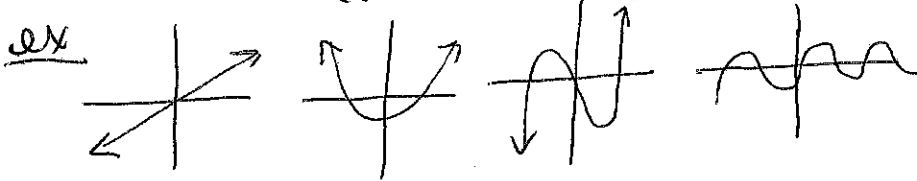


Math 12 F - Classnotes

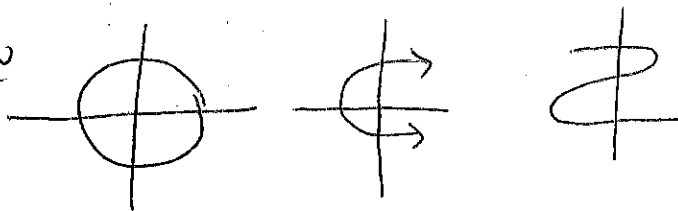
Chapter 6

6.1
6.2

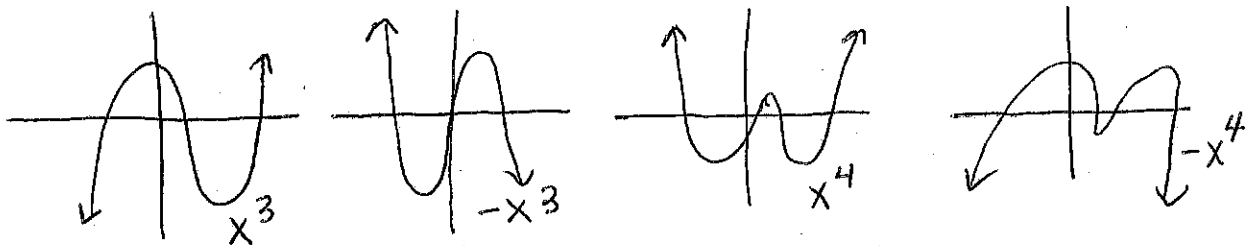
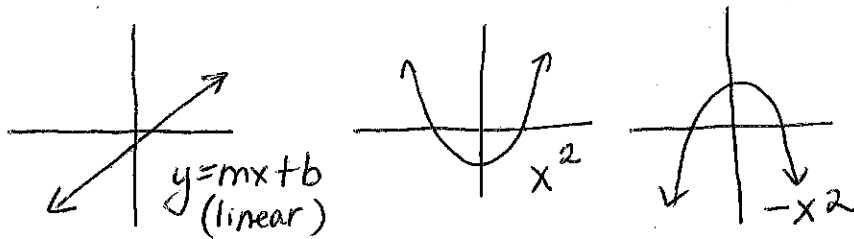
function - passes the vertical line test \updownarrow
(vertical line does not touch 2 points on graph)



Not A Function



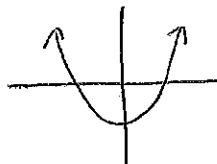
Basic shapes for polynomials:



end behaviour: description of the shape of the graph from left to right using direction + quadrants

| | |
|-----|----|
| II | I |
| III | IV |

ex



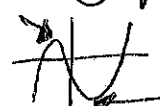
-graph starts in quad II down to quad III, then IV and up in quad I

degree - number of highest exponent

Vertex - turning point in quadratic 

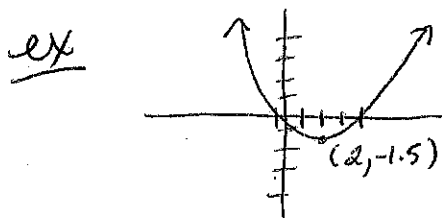
x intercepts $\rightarrow (y=0)$; where line crosses x axis

y intercepts $(x=0)$; where line crosses y axis

turning point - change in graph (like vertex)
ex  but may have more than 1

x values Domain - where graph goes left \rightarrow right

y values Range - where graph goes up + down



x intercepts: $(-1, 0)$ $(4, 0)$

y intercept: $(0, -1)$

vertex: $(2, -1.5)$

Domain: $x \in \mathbb{R}$

Range: $y \geq -1.5$

To use graphing calculator:

graph

$y \geq$ type in equation

draw

use Dg.solve

root = x intercepts

vertex: max \wedge ; min \vee



\rightarrow L or right
to find both

6.3 Model line of Best Fit

Scatter plot - info on a graph which does not make a line

line of best fit: a line that you draw that is closest to most of the points

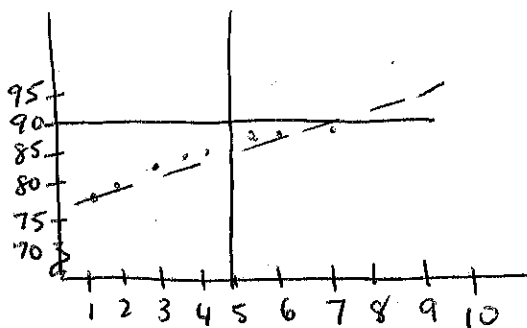
regression function: line or curve of best fit using data analysis

interpolate: use graph to find other values

extrapolate: use given graph to estimate values outside the graph domain or range

ex

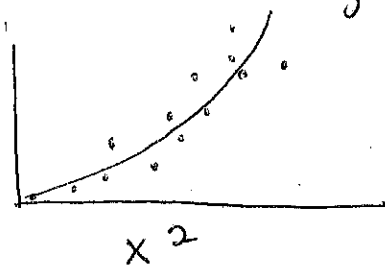
| x | y |
|---|----|
| 1 | 78 |
| 2 | 79 |
| 3 | 81 |
| 4 | 83 |
| 5 | 84 |
| 6 | 86 |
| 7 | 88 |



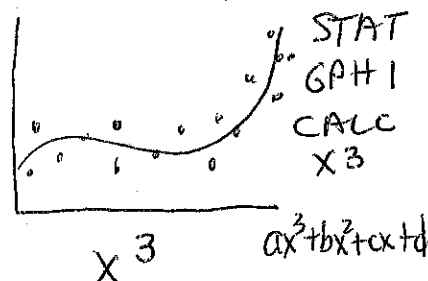
extrapolate
(estimate)
at 10 ~ 94

6.4

* use graphing calc to find curve equation (regression function)



STAT
← GPH1
CALC
X²
 ax^2+bx+c



STAT
GPH1
CALC
X³
 ax^3+bx^2+cx+d