Section 2.4 Graphing Polynomial Functions

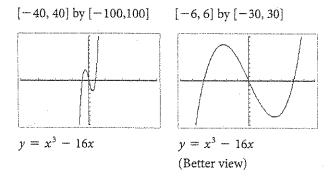
To graph a polynomial function:

See Table 2.1 in the text to determine possible shapes for the graph.
 (The graph of the function y = x³ - 16x has one of four

shapes in the table.)

2. Graph the function in a window large enough to see the shape of the complete graph. This graph is like the graph of Degree 3(b) in the table in Section 2.4.

3. If necessary, adjust the window for a better view of the graph.

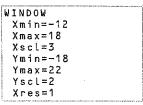


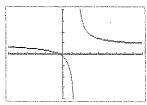
Section 2.4 Graphing Rational Functions

To graph a rational function:

- 1. Determine the vertical and horizontal asymptotes.
- 2. Set the window so that the *x* range is centered near the *x*-value of the vertical asymptote.
- 3. Set the window so that the horizontal asymptote is near the center of the *y* range.
- 4. Graph the function in a window large enough to see the shape of the complete graph.
- 5. If necessary, adjust the window for a better view of the graph.

To graph $y = \frac{12x + 8}{3x - 9}$, set the center of the window near the vertical asymptote x = 3 and near the horizontal asymptote y = 4.





Section 2.4 Graphing Piecewise Defined Functions

A piecewise defined function is defined differently over two or more intervals.

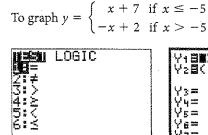
To graph a piecewise defined function $y = \begin{cases} f(x) & \text{if } x \leq a \\ g(x) & \text{if } x > a \end{cases}$

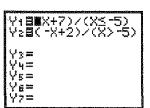
1. Go to the Y = key and enter.

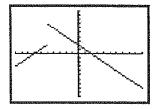
$$Y_1 = f(x)/(x \le a)$$
 and $Y_2 = g(x)/(x > a)$

(The inequality symbols are found under the TEST menu.)

- 2. Graph the function using an appropriate window.
- 3. Evaluating a piecewise defined function at a given value of x requires that the correct equation ("piece") be selected.







PUGET SOUND ENERGY Electric Tariff G

SCHEDULE 7 RESIDENTIAL SERVICE

(Single phase or three phase where available)

AVAILABILITY:

- 1. This schedule is limited to residential service, which means service that is delivered through one meter to a single-family unit and is used principally for domestic purposes, even though such service may incidentally be used for nondomestic purposes. Electric service for nondomestic use may be separately metered and served under the provisions of the applicable general service schedule, provided that such service does not include single-family units.
- 2. If this schedule is applied to transient occupancy in separately metered living units, billing shall be in the name of the owner on a continuous basis.
- 3. Single-phase motors rated greater than 7-1/2 HP shall not be served under this schedule except by the express written approval of the Company.
- 4. Space conditioning and water heating capacities shall be energized in increments of 6 KW or less by a thermostat, low voltage relay, or suitable time delay equipment.
- 5. Customers requiring three-phase service under this schedule will be required to contribute the incremental cost of three-phase facilities to provide such service.

MONTHLY RATE:

Basic Charge:

\$7.25 single phase or \$17.41 three phase

Energy Charge:

8.4991¢ per kWh for the first 600 kWh 10.2974¢ per kWh for all over 600 kWh

(R)

Lex x = # of kwh used.

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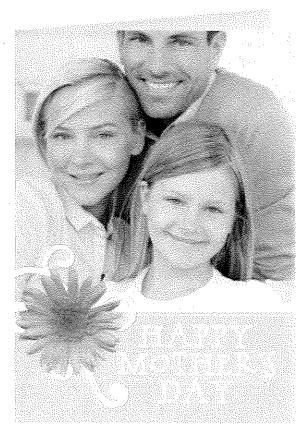
Tom DeBoer

Title: Director, Federal & State Regulatory Affairs

Math III: Piecewise Defined Fcts and Data Analysis.

Orange Blossom Mother's Day

Card Prices (Mail Order)



Folded Greeting Card Sold individually

1-19 Cards	 \$2.50 per card
20-49 Cards	\$2.25 per card
50+ Cards	\$2.00 per card

Shipping & Handling: Greet	ing Cards
1-3 cards	\$1.49
4-9 cards	\$2,49
10-19 cards	\$4.99
20-49 cards	\$6.99
50-99 cards	\$10.99
100-149 cards	\$14.99
150-199 cards	s18,99
Fach additional 50 cards	¢2 99

Let H= # of cards purchased.

$$C(N) = \begin{cases} 2.5N & \text{if } 0 \le N \le 19 \\ 2.25N & \text{if } 20 \le N \le 49 \\ 2.5N & \text{if } N > 50 \end{cases}$$

Notes: I must be a non-reguline integer.

In this situation it can be chappen to buy more

Medical Insurance

Compare two plans ...

UMP Classic	UMP CDHP
Monthly premium: \$241	Monthly premium: \$95
Family deductible: \$750	Family deductible: \$2,800
Typical Coinsurance: 15% (after deductible met)	Typical Coinsurance: 15% (after deductible met)
Family out of pocket max: \$4,000	Family out of pocket max: \$8,400
	Note: This plan comes with a \$1400 HSA credit

http://www.hca.wa.gov/pebb/Pages/index.aspx

Lac x = tetal ame billed allowed by insurance.

$$C(x) = \begin{cases} 2892 + x & \text{if } 05x5750 \\ 2892 + 750 + 0.15(x-750) & \text{if } 750 < x < 22417 \\ 2892 + 4600 & \text{if } x722417 \end{cases}$$

Note: Aprilary are 12(241) = \$2892

$$C(X) = \begin{cases} -260 + X & \text{if } 0.5 \times 5.2800 \\ -260 + 2800 + 0.15(X - 2800) & \text{if } 2800 < X & 40133 \\ -260 + 8400 & \text{if } X740133 \end{cases}$$

Make: Armual prenium includes the credic.
95(12)-1400 = \$160

2011 Tax Rate Schedules



The Tax Rate Schedules are shown so you can see the tax rate that applies to all levels of taxable income. Do not use them to figure your tax. Instead, see the instructions for line 44.

Schedule X-If your filing status is Single

If your taxable		The tax is:		
income is: Over—	But not over—		of the amount over—	
\$0	\$8,500	10%	\$0	
8,500	34,500	\$850.00 + 15%	8,500	
34,500	83,600	4,750.00 + 25%	34,500	
83,600	174,400	17,025.00 + 28%	83,600	
174,400	379,150	42,449.00 + 33%	174,400	
379,150	******	110,016.50 + 35%	379,150	

$$\int_{0.10}^{10} x = taxabk i \mu come$$

$$\int_{0.10}^{10} x = \int_{0.15}^{10} (x - 8500) if \quad 0.5 \times 5.8500$$

$$\int_{0.10}^{10} x = \int_{0.15}^{10} (x - 8500) if \quad 8500 < x \le 34500$$

$$\int_{0.10}^{10} (x - 14500) if \quad 83600 < x \le 174400$$

$$\int_{0.10}^{10} (x - 174400) if \quad 174400 < x \le 379150$$

$$\int_{0.10}^{10} (x - 33) (x - 174400) if \quad 174400 < x \le 379150$$

$$\int_{0.10}^{10} (x - 35) (x - 379150) if \quad x = 7379150$$



Price List

Notice 123 • Effective January 22, 2012

DOMESTIC		INTERNATIONAL		SERVICES AND	FEES
Retail Prices	Page	Retail Prices	Page	Domestic	Page
Express Mail®	. 2	Global Express Guaranteed®	27	Extra Services	49-50
Priority Mail®	3	Express Mail International®	30-31	Other Services	51
First-Class Mail®	1	Priority Mail International™	36-37	PO Boxes	52
Parcel Post®	4	First-Class Mail International™	42	Business Mailing Fees	53
Media Mail®	5	Airmail M-Bags	42	Stationery	53
Library Mail	5	Commercial Prices		Address Management	54-55
Commercial Prices		Global Express Guaranteed	28-29	Systems	
Express Mail	6-7	Express Mail International	32-35	International	
Priority Mail	8-10	Priority Mail International	38-41	Extra Services	56
First-Class Mail	11	IPA®	43	Quick References	
First-Class Package Service	12	ISAL®	44	Flat Rate Pricing	58
Standard Mail®	13-16	Country Price Groups	45-48	International	59
Parcel Select®	17-21			Domestic	60
Media Mail	22				
Library Mail	22				
Bound Printed Matter	23-24	growing and the second	20024		
Parcel Return Service	25			lorer ^e pelusj	man army or gardy plants to the state of the
Periodicals	26	•			

First-Class Mail - Retail Single Piece

Weight Not Over (ounces)	Letters ¹	Large Envelopes (Flats) ²	Parcels ³	
1	\$0.45	\$0.90	\$1.95	
2	0,65	1.10	1.95	
3	0.85	1,30	1.95	
3.5 ⁴	1.05	-	-	
4	-	1.50	2.12	
5	=	1,70	2.29	
6	-	1,90	2.46	
7	i u	2.10	2.63	
8		2.30	2.80	
9	-	2.50	2.97	
10	1.669g . 676	2.70	3.14	
11		2.90	3.31	
12	-	3,10	3.48	
13	-	3.30	3,65	
P	ostcard ⁵	\$0.3	2	
nmachinable S	Surcharge (Letters Only) ¹	0.2)	

- Letters that meet one or more of the nonmachinable characteristics in DMM 101.1.2 are subject to the \$0.20 nonmachinable surcharge.
- Large envelope-sized pieces that are rigid, nonrectangular, or not uniformly thick pay parcel prices.
- 3. For keys and identification devices, add \$0.76. If more than 13 ounces, see Priority Mail (footnote #4) on page 3.
- For weights over 3.5 ounces, see Large Envelopes (Flats) prices.
- The card price applies to each single or double postcardsized mailpiece when originally mailed; reply half of double postcard must be designed for reply mail purposes only.

See page 60 for postcard, letter, large envelope, and parcel dimensions.

club:
$$\begin{cases} 0.45 & \text{if } 0 \le \omega \le 1 \\ 0.65 + .2(\omega - 2) & \text{if } 3 < \omega \le 3.5 \\ 1.5 + .2(\omega - 4) & \text{if } \omega = 3.5 \end{cases}$$

Let we letter weight in ox rounded up to the pearest ox (except 3.502).

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