

APPENDIX B

CONVERSIONS

CONVERSIONS

A Note about Heating Values

The heat content of a fuel is the quantity of energy released by burning a unit amount of that fuel. However, this value is not absolute and can vary according to several factors. For example, empirical formulae for determining the heating value of liquid fuels depend on the fuels' American Petroleum Institute (API) gravity. The API gravity varies depending on the percent by weight of the chemical constituents and impurities in the fuel, both of which are affected by the combination of raw materials used to produce the fuel and by the type of manufacturing process. Temperature and climatic conditions are also factors.

Because of these variations, the heating values in Table B.4 may differ from values in other publications. The figures in this report are representative or average values, not absolute ones. The gross (higher) heating values used here agree with those used by the Energy Information Administration (EIA).

Heating values fall into two categories, usually referred to as "higher" (or gross) and "lower" (or net). If the products of fuel combustion are cooled back to the initial fuel-air or fuel-oxidizer mixture temperature and the water formed during combustion is condensed, the energy released by the process is the higher (gross) heating value. If the products of combustion are cooled to the initial fuel-air temperature, but the water is considered to remain as a vapor, the energy released by the process is the lower (net) heating value. Usually the difference between the gross and net heating values for fuels used in transportation is around 5 to 8 percent; however, it is important to be consistent in their use.

Table B.1
Hydrogen Heat Content

1 kilogram hydrogen =	
Higher heating value	Lower heating value
134,200 Btu	113,400 Btu
39.3 kWhr	33.2 kWhr
141,600 kJ	119,600 kJ
33,800 kCal	28,560 kCal

Table B.2
Hydrogen Conversions

	Weight		Gas		Liquid	
	Pounds (lb)	Kilograms (kg)	Standard cubic feet (SCF)	Normal cubic meter (Nm ³)	Gallons (gal)	Liters (L)
1 lb	1.0	0.4536	192.00	5.047	1.6928	6.408
1 kg	2.205	1.0	423.3	11.126	3.733	14.128
1 SCF gas	0.005209	0.002363	1.0	0.02628	0.00882	0.0339
1 Nm ³ gas	0.19815	0.08988	38.04	1.0	0.3355	1.2699
1 gal liquid	0.5906	0.2679	113.41	2.981	1.0	3.785
1 L liquid	0.15604	0.07078	29.99	0.77881	0.2642	1.0

Table B.3
Pressure Conversions

	Weight		Gas		Liquid	
	Pounds (lb)	Kilograms (kg)	Standard cubic feet (SCF)	Normal cubic meter (Nm ³)	Gallons (gal)	Liters (L)
1 lb	1.0	0.4536	192.00	5.047	1.6928	6.408
1 kg	2.205	1.0	423.3	11.126	3.733	14.128
1 SCF gas	0.005209	0.002363	1.0	0.02628	0.00882	0.0339
1 Nm ³ gas	0.19815	0.08988	38.04	1.0	0.3355	1.2699
1 gal liquid	0.5906	0.2679	113.41	2.981	1.0	3.785
1 L liquid	0.15604	0.07078	29.99	0.77881	0.2642	1.0

Table B.4
Heat Content for Various Fuels

Conventional gasoline	125,000 Btu/gal (gross) = 115,400 Btu/gal (net)
E10	120,900 Btu/gal (gross) = 112,400 Btu/gal (net)
E15	119,000 Btu/gal (gross) = 109,400 Btu/gal (net)
Hydrogen	134,200 Btu/kg (gross) = 113,400 Btu/kg (net)
Diesel motor fuel	138,700 Btu/gal (gross) = 128,700 Btu/gal (net)
Biodiesel	126,200 Btu/gal (gross) = 117,100 Btu/gal (net)
Methanol	64,600 Btu/gal (gross) = 56,600 Btu/gal (net)
Ethanol	84,600 Btu/gal (gross) = 75,700 Btu/gal (net)
E85	90,700 Btu/gal (gross) = 81,600 Btu/gal (net)
Aviation gasoline	120,200 Btu/gal (gross) = 112,000 Btu/gal (net)
Liquefied petroleum gas (LPG)	91,300 Btu/gal (gross) = 83,500 Btu/gal (net)
Butane	103,000 Btu/gal (gross) = 93,000 Btu/gal (net)
Jet fuel (naphtha)	127,500 Btu/gal (gross) = 118,700 Btu/gal (net)
Jet fuel (kerosene)	135,000 Btu/gal (gross) = 128,100 Btu/gal (net)
Lubricants	144,400 Btu/gal (gross) = 130,900 Btu/gal (net)
Waxes	131,800 Btu/gal (gross) = 120,200 Btu/gal (net)
Asphalt and road oil	158,000 Btu/gal (gross) = 157,700 Btu/gal (net)
Liquefied natural gas (LNG)	84,800 Btu/gal (gross) = 74,700 Btu/gal (net)
Compressed natural gas (CNG)	22,500 Btu/lb (gross) = 20,300 Btu/lb (net)
Crude petroleum	138,100 Btu/gal (gross) = 131,800 Btu/gal (net)
Fuel Oils	
Residual	149,700 Btu/gal (gross) = 138,400 Btu/gal (net)
Distillate	138,700 Btu/gal (gross) = 131,800 Btu/gal (net)
Coal	
Production average	20.192×10^6 Btu/short ton
Consumption average	19.612×10^6 Btu/short ton

Table B.5
Fuel Equivalents

1 million bbl crude oil/day	= 0.365 billion bbl crude oil/year = 2.117 quadrillion Btu/year = 107.944 million short tons coal/year = 97.927 million metric tons coal/year = 2.067 trillion ft ³ natural gas/year = 2,233 petajoules/year
1 billion bbl crude oil/year	= 2.740 million bbl crude oil/day = 5.800 quadrillion Btu/year = 295.737 million short tons coal/year = 268.293 million metric tons coal/year = 5.644 trillion ft ³ natural gas/year = 6,119 petajoules/year
1 quadrillion Btu/year	= 0.5219 gasoline gallon equivalents = 0.472 million bbl crude oil/day = 172.414 million bbl crude oil/year = 50.989 million short tons coal/year = 46.257 million metric tons coal/year = 976.563 billion ft ³ natural gas/year = 1,055 petajoules/year
1 billion short tons coal/year	= 0.907 billion metric tons coal/year = 9.264 million bbl crude oil/day = 3.381 billion bbl crude oil/year = 19.612 quadrillion Btu/year = 19.152 trillion ft ³ natural gas/year = 20,691 petajoules/year
1 billion metric tons coal/year	= 1.102 billion short tons coal/year = 8.404 million bbl crude oil/day = 3.068 billion bbl crude oil/year = 17.792 quadrillion btu/year = 17.375 trillion ft ³ natural gas/year = 18,771 petajoules/year
1 trillion ft ³ natural gas/year	= 0.484 million bbl crude oil/day = 0.177 billion bbl crude oil/year = 1.024 quadrillion Btu/year = 52.213 million short tons coal/year = 47.368 million metric tons coal/year = 1,080 petajoules/year
1 petajoule/year	= 447.741 bbl crude oil/day = 163.425 thousand bbl crude oil/year = 0.948 trillion Btu/year = 48.331 thousand short tons coal/year = 43.846 thousand metric tons coal/year = 0.926 billion ft ³ natural gas/year

Table B.6
Energy Unit Conversions

1 Btu	= 778.2 ft-lb = 107.6 kg-m = 1055 J = 39.30×10^{-5} hp-h = 39.85×10^{-5} metric hp-h = 29.31×10^{-5} kWhr	1 kWhr	= 3412 Btu ^a = 2.655×10^6 ft-lb = 3.671×10^5 kg-m = 3.600×10^6 J = 1.341 hp-h = 1.360 metric hp-h
1 kg-m	= 92.95×10^{-4} Btu = 7.233 ft-lb = 9.806 J = 36.53×10^{-7} hp-h = 37.04×10^{-7} metric hp-h = 27.24×10^{-7} kWhr	1 Joule	= 94.78×10^{-5} Btu = 0.7376 ft-lb = 0.1020 kg-m = 37.25×10^{-8} hp-h = 37.77×10^{-8} metric hp-h = 27.78×10^{-8} kWhr
1 hp-h	= 2544 Btu = 1.98×10^6 ft-lb = 2.738×10^6 kgm = 2.685×10^6 J = 1.014 metric hp-h = 0.7475 kWhr	1 metric hp-h	= 2510 Btu = 1.953×10^6 ft-lb = 27.00×10^4 kg-m = 2.648×10^6 J = 0.9863 hp-h = 0.7355 kWhr

^aThis figure does not take into account the fact that electricity generation and distribution efficiency is approximately 33%. If generation and distribution efficiency are taken into account, 1 kWhr = 10,339 Btu.

Table B.7
International Energy Conversions

To:	Petajoules	Giga-calories	Million tonnes of oil equivalent	Million Btu	Gigawatt-hours
From: multiply by:					
Petajoules	1	238.8×10^3	2.388×10^{-2}	947.8×10^3	277.8
Gigacalories	4.1868×10^{-6}	1	10^{-7}	3.968	1.163×10^{-3}
Million tonnes of oil equivalent	41.868	10^7	1	3.968×10^7	11,630
Million Btu	1.0551×10^{-6}	0.252	2.52×10^{-8}	1	2.931×10^{-4}
Gigawatthours	3.6×10^{-3}	860	8.6×10^{-5}	3412	1

Table B.8
Distance and Velocity Conversions

1 in.	= 83.33×10^{-3} ft	1 ft	= 12.0 in.
	= 27.78×10^{-3} yd		= 0.33 yd
	= 15.78×10^{-6} mile		= 189.4×10^{-3} mile
	= 25.40×10^{-3} m		= 0.3048 m
	= 0.2540×10^{-6} km		= 0.3048×10^{-3} km
1 mile	= 63360 in.	1 km	= 39370 in.
	= 5280 ft		= 3281 ft
	= 1760 yd		= 1093.6 yd
	= 1609 m		= 0.6214 mile
	= 1.609 km		= 1000 m
1 ft/sec = $0.3048 \text{ m/s} = 0.6818 \text{ mph} = 1.0972 \text{ km/h}$			
1 m/sec = $3.281 \text{ ft/s} = 2.237 \text{ mph} = 3.600 \text{ km/h}$			
1 km/h = $0.9114 \text{ ft/s} = 0.2778 \text{ m/s} = 0.6214 \text{ mph}$			
1 mph = $1.467 \text{ ft/s} = 0.4469 \text{ m/s} = 1.609 \text{ km/h}$			

Table B.9
Alternative Measures of Greenhouse Gases

1 pound methane, measured in carbon units (CH ₄)	=	1.333 pounds methane, measured at full molecular weight (CH ₄)
1 pound carbon dioxide, measured in carbon units (CO ₂ -C)	=	3.6667 pounds carbon dioxide, measured at full molecular weight (CO ₂)
1 pound carbon monoxide, measured in carbon units (CO-C)	=	2.333 pounds carbon monoxide, measured at full molecular weight (CO)
1 pound nitrous oxide, measured in nitrogen units (N ₂ O-N)	=	1.571 pounds nitrous oxide, measured at full molecular weight (N ₂ O)

Table B.10
Volume and Flow Rate Conversions^a

1 U.S. gal	= 231 in. ³ = 0.1337 ft ³ = 3.785 liters = 0.8321 imperial gal = 0.0238 bbl = 0.003785 m ³	1 liter	= 61.02 in. ³ = 3.531 x 10 ⁻² ft ³ = 0.2624 U.S. gal = 0.2200 imperial gal = 6.29 x 10 ⁻³ bbl = 0.001 m ³
A U.S. gallon of gasoline weighs 6.2 pounds			
1 imperial gal	= 277.4 in. ³ = 0.1606 ft ³ = 4.545 liters = 1.201 U.S. gal = 0.0286 bbl = 0.004546 m ³	1 bbl	= 9702 in. ³ = 5.615 ft ³ = 158.97 liters = 42 U.S. gal = 34.97 imperial gal = 0.15897 m ³
For Imperial gallons, multiply above values by 1.201			
1 liter/hr	= 3.209 ft ³ /day = 90.84 liter/day = 19.97 imperial gal/day = 0.5712 bbl/day		= 1171 ft ³ /year = 33157 liter/year = 7289 imperial gal/year = 207.92 bbl/year
1 bbl/hr	= 0.8474 ft ³ /day = 6.298 U.S. gal/day = 5.28 imperial gal/day = 0.1510 bbl/day	= 309.3 ft ³ /year = 2299 U.S. gal/year = 1927 imperial gal/year = 55.10 bbl/year	
	= 137.8 ft ³ /year = 1008 U.S. gal/day = 839.3 imperial gal/day = 3815 liter/day	= 49187 ft ³ year = 3.679 x 10 ⁵ U.S. gal/year = 3.063 x 10 ⁵ imperial gal/year = 1.393 x 10 ⁶ liter/day	

^aThe conversions for flow rates are identical to those for volume measures, if the time units are identical.

Table B.11
Power Conversions

FROM	TO					
	Horsepower	Kilowatts	Metric horsepower	Ft-lb per sec	Kilocalories per sec	Btu per sec
Horsepower	1	0.7457	1.014	550	0.1781	0.7068
Kilowatts	1.341	1	1.360	737.6	0.239	0.9478
Metric horsepower	0.9863	0.7355	1	542.5	0.1757	0.6971
Ft-lb per sec	1.36×10^{-3}	1.356×10^{-3}	1.84×10^{-3}	1	0.3238×10^{-3}	1.285×10^{-3}
Kilocalories per sec	5.615	4.184	5.692	3088	1	3.968
Btu per sec	1.415	1.055	1.434	778.2	0.2520	1

Table B.12
Mass Conversions

FROM	TO				
	Pound	Kilogram	Short ton	Long ton	Metric ton
Pound	1	0.4536	5.0×10^{-4}	4.4643×10^{-4}	4.5362×10^{-4}
Kilogram	2.205	1	1.1023×10^{-3}	9.8425×10^{-4}	1.0×10^{-3}
Short ton	2,000	907.2	1	0.8929	0.9072
Long ton	2,240	1,106	1.12	1	1.016
Metric ton	2,205	1,000	1.102	0.9842	1

Table B.13
Fuel Efficiency Conversions

MPG	Miles/liter	Kilometers/L	L/100 kilometers	Grams of CO ₂ per mile ^a	Pounds of CO ₂ per mile ^a
10	2.64	4.25	23.52	877.80	1.94
15	3.96	6.38	15.68	585.20	1.29
20	5.28	8.50	11.76	438.90	0.97
25	6.60	10.63	9.41	351.12	0.78
30	7.92	12.75	7.84	292.60	0.65
35	9.25	14.88	6.72	250.80	0.55
40	10.57	17.00	5.88	219.45	0.49
45	11.89	19.13	5.23	195.07	0.43
50	13.21	21.25	4.70	175.56	0.39
55	14.53	23.38	4.28	159.60	0.35
60	15.85	25.51	3.92	146.30	0.32
65	17.17	27.63	3.62	135.05	0.30
70	18.49	29.76	3.36	125.40	0.28
75	19.81	31.88	3.14	117.04	0.26
80	21.13	34.01	2.94	109.73	0.24
85	22.45	36.13	2.77	103.27	0.23
90	23.77	38.26	2.61	97.53	0.22
95	25.09	40.38	2.48	92.40	0.20
100	26.42	42.51	2.35	87.78	0.19
105	27.74	44.64	2.24	83.60	0.18
110	29.06	46.76	2.14	79.80	0.18
115	30.38	48.89	2.05	76.33	0.17
120	31.70	51.01	1.96	73.15	0.16
125	33.02	53.14	1.88	70.22	0.16
130	34.34	55.26	1.81	67.52	0.15
135	35.66	57.39	1.74	65.02	0.14
140	36.98	59.51	1.68	62.70	0.14
145	38.30	61.64	1.62	60.54	0.13
150	39.62	63.76	1.57	58.52	0.13
Formula	MPG/3.785	MPG/[3.785/1.609]	235.24/MPG	8,778/MPG	19.4/MPG

^aFor gasoline-fueled vehicles.

Table B.14
SI Prefixes and Their Values

	Value	Prefix	Symbol
One million million millionth	10^{-18}	atto	a
One thousand million millionth	10^{-15}	femto	f
One million millionth	10^{-12}	pico	p
One thousand millionth	10^{-9}	nano	n
One millionth	10^{-6}	micro	μ
One thousandth	10^{-3}	milli	m
One hundredth	10^{-2}	centi	c
One tenth	10^{-1}	deci	
One	10^0		
Ten	10^1	deca	
One hundred	10^2	hecto	
One thousand	10^3	kilo	k
One million	10^6	mega	M
One billion ^a	10^9	giga	G
One trillion ^a	10^{12}	tera	T
One quadrillion ^a	10^{15}	peta	P
One quintillion ^a	10^{18}	exa	E

^aCare should be exercised in the use of this nomenclature, especially in foreign correspondence, as it is either unknown or carries a different value in other countries. A "billion," for example, signifies a value of 10^{12} in most other countries.

Table B.15
Metric Units and Abbreviations

Quantity	Unit name	Symbol
Energy	joule	J
Specific energy	joule/kilogram	J/kg
Specific energy consumption	joule/kilogram•kilometer	J/(kg•km)
Energy consumption	joule/kilometer	J/km
Energy economy	kilometer/kilojoule	km/kJ
Power	kilowatt	kW
Specific power	watt/kilogram	W/kg
Power density	watt/meter ³	W/m ³
Speed	kilometer/hour	km/h
Acceleration	meter/second ²	m/s ²
Range (distance)	kilometer	km
Weight	kilogram	kg
Torque	newton•meter	N•m
Volume	meter ³	m ³
Mass; payload	kilogram	kg
Length; width	meter	m
Brake specific fuel consumption	kilogram/joule	kg/J
Fuel economy (heat engine)	liters/100 km	L/100 km

Table B.16
Carbon Coefficients, 2002
(Million metric tons carbon per quadrillion Btu)

Fuel Type	
Coal	
Coal (residential)	26.04
Coal (commercial)	26.04
Coal (industrial coking)	25.63
Coal (industrial other)	25.74
Coal (electric utility)	25.98
Natural gas	
Natural gas (pipeline)	14.47
Natural gas (flared)	14.92
Petroleum	
Asphalt and road oil	20.62
Aviation gasoline	18.87
Crude oil	20.30
Distillate fuel	19.95
Jet fuel	19.33
Kerosene	19.72
LPG	16.99
Lubricants	20.24
Motor gasoline	19.34
Petrochemical feed	19.37
Petroleum coke	27.85
Residual fuel	21.49
Waxes	19.81

Note: All coefficients based on Higher Heating (Gross Calorific) Value and assume 100 percent combustion.

Conversion of Constant Dollar Values

Many types of information in this data book are expressed in dollars. Generally, constant dollars are used—that is, dollars of a fixed value for a specific year, such as 1990 dollars. Converting current dollars to constant dollars, or converting constant dollars for one year to constant dollars for another year, requires conversion factors (Table B.17 and B.18). Table B.17 shows conversion factors for the Consumer Price Index inflation factors. Table B.18 shows conversion factors using the Gross National Product inflation factors.

Table B.17
Consumer Price Inflation (CPI) Index

From:	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1970	1.000	1.044	1.077	1.144	1.271	1.387	1.466	1.562	1.680	1.871
1971	0.958	1.000	1.032	1.096	1.217	1.328	1.405	1.496	1.610	1.793
1972	0.928	0.969	1.000	1.062	1.179	1.287	1.361	1.450	1.560	1.737
1973	0.874	0.912	0.941	1.000	1.110	1.212	1.282	1.365	1.468	1.635
1974	0.787	0.822	0.848	0.901	1.000	1.091	1.154	1.229	1.323	1.473
1975	0.721	0.753	0.777	0.825	0.916	1.000	1.058	1.126	1.212	1.349
1976	0.682	0.712	0.735	0.780	0.866	0.946	1.000	1.065	1.146	1.276
1977	0.640	0.668	0.690	0.733	0.814	0.888	0.939	1.000	1.076	1.198
1978	0.595	0.621	0.641	0.681	0.756	0.825	0.873	0.929	1.000	1.113
1979	0.534	0.558	0.576	0.612	0.679	0.741	0.784	0.835	0.898	1.000
1980	0.471	0.492	0.507	0.539	0.598	0.653	0.691	0.735	0.791	0.881
1981	0.427	0.446	0.460	0.488	0.542	0.592	0.626	0.667	0.717	0.799
1982	0.402	0.420	0.433	0.460	0.511	0.558	0.590	0.628	0.676	0.752
1983	0.390	0.407	0.420	0.446	0.495	0.540	0.571	0.608	0.655	0.729
1984	0.373	0.390	0.402	0.427	0.474	0.518	0.548	0.583	0.628	0.699
1985	0.361	0.376	0.388	0.413	0.458	0.500	0.529	0.563	0.606	0.675
1986	0.354	0.370	0.381	0.405	0.450	0.491	0.519	0.553	0.595	0.662
1987	0.342	0.357	0.368	0.391	0.434	0.474	0.501	0.533	0.574	0.639
1988	0.328	0.342	0.353	0.375	0.417	0.455	0.481	0.512	0.551	0.614
1989	0.313	0.327	0.337	0.358	0.398	0.434	0.459	0.489	0.526	0.585
1990	0.297	0.310	0.320	0.340	0.377	0.412	0.435	0.464	0.499	0.555
1991	0.285	0.297	0.307	0.326	0.362	0.395	0.418	0.445	0.479	0.533
1992	0.277	0.289	0.298	0.316	0.351	0.383	0.406	0.432	0.465	0.517
1993	0.269	0.280	0.289	0.307	0.341	0.372	0.394	0.419	0.451	0.502
1994	0.262	0.273	0.282	0.300	0.333	0.363	0.384	0.409	0.440	0.490
1995	0.255	0.266	0.274	0.291	0.323	0.353	0.373	0.398	0.428	0.476
1996	0.247	0.258	0.266	0.283	0.314	0.343	0.363	0.386	0.416	0.463
1997	0.242	0.252	0.260	0.277	0.307	0.335	0.355	0.378	0.406	0.452
1998	0.238	0.248	0.256	0.272	0.302	0.330	0.349	0.372	0.400	0.445
1999	0.233	0.243	0.251	0.267	0.296	0.323	0.342	0.364	0.391	0.436
2000	0.225	0.235	0.243	0.258	0.286	0.312	0.330	0.352	0.379	0.422
2001	0.219	0.229	0.236	0.251	0.278	0.304	0.321	0.342	0.368	0.410
2002	0.216	0.225	0.232	0.247	0.274	0.299	0.316	0.337	0.362	0.404
2003	0.211	0.220	0.227	0.241	0.268	0.292	0.309	0.329	0.354	0.395
2004	0.205	0.214	0.221	0.235	0.261	0.285	0.301	0.321	0.345	0.384
2005	0.199	0.207	0.214	0.227	0.252	0.275	0.291	0.310	0.334	0.372
2006	0.192	0.201	0.207	0.220	0.245	0.267	0.282	0.301	0.323	0.360
2007	0.187	0.195	0.202	0.214	0.238	0.259	0.274	0.292	0.314	0.350
2008	0.180	0.188	0.194	0.206	0.229	0.250	0.264	0.281	0.303	0.337
2009	0.181	0.189	0.195	0.207	0.230	0.251	0.265	0.282	0.304	0.338
2010	0.178	0.186	0.192	0.204	0.226	0.247	0.261	0.278	0.299	0.333
2011	0.172	0.180	0.186	0.197	0.219	0.239	0.253	0.269	0.290	0.323

Table B.17
Consumer Price Inflation (CPI) Index (Continued)

From:	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
1970	2.124	2.343	2.487	2.567	2.678	2.773	2.825	2.928	3.049	3.196
1971	2.035	2.244	2.383	2.459	2.565	2.657	2.706	2.805	2.921	3.062
1972	1.971	2.175	2.309	2.383	2.486	2.574	2.622	2.718	2.830	2.967
1973	1.856	2.047	2.173	2.243	2.340	2.423	2.468	2.559	2.664	2.793
1974	1.671	1.844	1.957	2.020	2.108	2.183	2.223	2.304	2.400	2.515
1975	1.532	1.690	1.794	1.851	1.931	2.000	2.037	2.112	2.199	2.305
1976	1.448	1.598	1.696	1.750	1.826	1.891	1.926	1.996	2.079	2.179
1977	1.360	1.500	1.592	1.644	1.715	1.776	1.809	1.875	1.952	2.046
1978	1.264	1.394	1.480	1.528	1.594	1.650	1.681	1.742	1.814	1.902
1979	1.135	1.252	1.329	1.372	1.431	1.482	1.510	1.565	1.629	1.708
1980	1.000	1.103	1.171	1.209	1.261	1.306	1.330	1.379	1.436	1.505
1981	0.906	1.000	1.062	1.096	1.143	1.184	1.206	1.250	1.301	1.364
1982	0.854	0.942	1.000	1.032	1.077	1.115	1.136	1.177	1.226	1.285
1983	0.827	0.913	0.969	1.000	1.043	1.080	1.100	1.141	1.188	1.245
1984	0.793	0.875	0.929	0.959	1.000	1.036	1.055	1.093	1.139	1.193
1985	0.766	0.845	0.897	0.926	0.966	1.000	1.019	1.056	1.099	1.152
1986	0.752	0.829	0.880	0.909	0.948	0.982	1.000	1.036	1.079	1.131
1987	0.725	0.800	0.849	0.877	0.915	0.947	0.965	1.000	1.041	1.092
1988	0.697	0.768	0.816	0.842	0.878	0.910	0.926	0.960	1.000	1.048
1989	0.665	0.733	0.778	0.803	0.838	0.868	0.884	0.916	0.954	1.000
1990	0.630	0.695	0.738	0.762	0.795	0.823	0.839	0.869	0.905	0.949
1991	0.605	0.667	0.709	0.731	0.763	0.790	0.805	0.834	0.869	0.910
1992	0.587	0.648	0.688	0.710	0.741	0.767	0.781	0.810	0.843	0.884
1993	0.570	0.629	0.668	0.689	0.719	0.745	0.758	0.786	0.819	0.858
1994	0.556	0.613	0.651	0.672	0.701	0.726	0.740	0.767	0.798	0.837
1995	0.541	0.596	0.633	0.654	0.682	0.706	0.719	0.745	0.776	0.814
1996	0.525	0.579	0.615	0.635	0.662	0.686	0.699	0.724	0.754	0.790
1997	0.513	0.566	0.601	0.621	0.647	0.670	0.683	0.708	0.737	0.773
1998	0.506	0.558	0.592	0.611	0.637	0.660	0.672	0.697	0.726	0.761
1999	0.495	0.546	0.579	0.598	0.624	0.646	0.658	0.682	0.710	0.744
2000	0.479	0.528	0.560	0.578	0.603	0.625	0.636	0.660	0.687	0.720
2001	0.465	0.513	0.545	0.562	0.587	0.608	0.619	0.641	0.668	0.700
2002	0.458	0.505	0.536	0.554	0.578	0.598	0.609	0.631	0.658	0.689
2003	0.448	0.494	0.524	0.541	0.565	0.585	0.596	0.617	0.643	0.674
2004	0.436	0.481	0.511	0.527	0.550	0.570	0.580	0.601	0.626	0.656
2005	0.422	0.465	0.494	0.510	0.532	0.551	0.561	0.582	0.606	0.635
2006	0.409	0.451	0.479	0.494	0.515	0.534	0.544	0.563	0.587	0.615
2007	0.397	0.438	0.465	0.480	0.501	0.519	0.529	0.548	0.571	0.598
2008	0.383	0.422	0.448	0.463	0.483	0.500	0.509	0.528	0.549	0.576
2009	0.384	0.424	0.450	0.464	0.484	0.502	0.511	0.530	0.551	0.578
2010	0.378	0.417	0.443	0.457	0.476	0.493	0.503	0.521	0.543	0.569
2011	0.366	0.404	0.429	0.443	0.462	0.478	0.487	0.505	0.526	0.551

Table B.17
Consumer Price Inflation (CPI) Index (Continued)

From:	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1970	3.369	3.510	3.616	3.724	3.820	3.928	4.044	4.137	4.201	4.294
1971	3.227	3.363	3.464	3.568	3.659	3.763	3.874	3.963	4.025	4.114
1972	3.127	3.258	3.356	3.457	3.545	3.646	3.754	3.840	3.900	3.986
1973	2.944	3.068	3.160	3.255	3.338	3.432	3.534	3.615	3.671	3.752
1974	2.651	2.763	2.846	2.931	3.006	3.091	3.183	3.256	3.306	3.379
1975	2.429	2.532	2.608	2.686	2.755	2.833	2.916	2.983	3.030	3.097
1976	2.297	2.394	2.466	2.540	2.605	2.678	2.757	2.821	2.865	2.928
1977	2.157	2.248	2.315	2.384	2.446	2.515	2.589	2.649	2.690	2.749
1978	2.005	2.089	2.152	2.216	2.273	2.337	2.406	2.462	2.500	2.555
1979	1.800	1.876	1.933	1.990	2.041	2.099	2.161	2.211	2.245	2.295
1980	1.586	1.653	1.703	1.754	1.799	1.850	1.904	1.948	1.978	2.022
1981	1.438	1.498	1.543	1.590	1.630	1.677	1.726	1.766	1.793	1.833
1982	1.354	1.411	1.454	1.497	1.536	1.579	1.626	1.663	1.689	1.726
1983	1.312	1.367	1.409	1.451	1.488	1.530	1.575	1.611	1.637	1.673
1984	1.258	1.311	1.350	1.391	1.426	1.467	1.510	1.545	1.569	1.603
1985	1.215	1.266	1.304	1.343	1.377	1.416	1.458	1.492	1.515	1.548
1986	1.193	1.243	1.280	1.318	1.352	1.391	1.432	1.464	1.487	1.520
1987	1.151	1.199	1.235	1.272	1.305	1.342	1.381	1.413	1.435	1.467
1988	1.105	1.151	1.186	1.221	1.253	1.288	1.326	1.357	1.378	1.408
1989	1.054	1.098	1.131	1.165	1.195	1.229	1.265	1.294	1.315	1.344
1990	1.000	1.042	1.073	1.106	1.134	1.166	1.200	1.228	1.247	1.275
1991	0.960	1.000	1.030	1.061	1.088	1.119	1.152	1.178	1.197	1.223
1992	0.932	0.971	1.000	1.030	1.056	1.086	1.118	1.144	1.162	1.187
1993	0.904	0.943	0.971	1.000	1.026	1.055	1.086	1.111	1.128	1.153
1994	0.882	0.919	0.947	0.975	1.000	1.028	1.059	1.083	1.100	1.124
1995	0.858	0.894	0.921	0.948	0.972	1.000	1.030	1.053	1.070	1.093
1996	0.833	0.868	0.894	0.921	0.945	0.971	1.000	1.023	1.039	1.062
1997	0.814	0.849	0.874	0.900	0.923	0.950	0.978	1.000	1.016	1.038
1998	0.802	0.836	0.861	0.887	0.909	0.935	0.963	0.985	1.000	1.022
1999	0.785	0.818	0.842	0.867	0.890	0.915	0.942	0.963	0.978	1.000
2000	0.759	0.791	0.815	0.839	0.861	0.885	0.911	0.932	0.947	0.967
2001	0.738	0.769	0.792	0.816	0.837	0.861	0.886	0.906	0.920	0.941
2002	0.727	0.757	0.780	0.803	0.824	0.847	0.872	0.892	0.906	0.926
2003	0.710	0.740	0.763	0.785	0.805	0.828	0.853	0.872	0.886	0.905
2004	0.692	0.721	0.743	0.765	0.785	0.807	0.831	0.850	0.863	0.882
2005	0.669	0.697	0.718	0.740	0.759	0.780	0.803	0.822	0.835	0.853
2006	0.648	0.676	0.696	0.717	0.735	0.756	0.778	0.796	0.809	0.826
2007	0.630	0.657	0.677	0.697	0.715	0.735	0.757	0.774	0.786	0.804
2008	0.607	0.633	0.652	0.671	0.688	0.708	0.729	0.745	0.757	0.774
2009	0.602	0.635	0.654	0.674	0.691	0.710	0.731	0.748	0.760	0.777
2010	0.599	0.625	0.643	0.663	0.680	0.699	0.720	0.736	0.748	0.764
2011	0.581	0.605	0.624	0.642	0.659	0.678	0.698	0.714	0.725	0.741

Table B.17
Consumer Price Inflation (CPI) Index (Continued)

From:	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1970	4.438	4.564	4.637	4.742	4.869	5.034	5.196	5.344	5.549	5.529
1971	4.252	4.373	4.442	4.543	4.664	4.822	4.978	5.120	5.316	5.297
1972	4.120	4.237	4.304	4.402	4.519	4.672	4.823	4.960	5.151	5.132
1973	3.878	3.989	4.052	4.144	4.255	4.399	4.541	4.670	4.849	4.832
1974	3.493	3.592	3.649	3.732	3.832	3.961	4.089	4.206	4.367	4.352
1975	3.201	3.292	3.344	3.420	3.511	3.630	3.747	3.854	4.002	3.988
1976	3.026	3.112	3.162	3.234	3.320	3.432	3.543	3.644	3.784	3.770
1977	2.842	2.922	2.969	3.036	3.117	3.223	3.327	3.421	3.553	3.540
1978	2.641	2.716	2.759	2.822	2.897	2.995	3.092	3.180	3.302	3.290
1979	2.372	2.439	2.478	2.534	2.602	2.690	2.777	2.856	2.966	2.955
1980	2.090	2.149	2.183	2.233	2.292	2.370	2.447	2.516	2.613	2.604
1981	1.894	1.948	1.979	2.024	2.078	2.149	2.218	2.281	2.369	2.360
1982	1.784	1.835	1.864	1.907	1.958	2.024	2.089	2.149	2.231	2.223
1983	1.729	1.778	1.806	1.847	1.897	1.961	2.024	2.082	2.162	2.154
1984	1.657	1.705	1.731	1.771	1.818	1.880	1.940	1.996	2.072	2.065
1985	1.600	1.646	1.672	1.710	1.756	1.815	1.874	1.927	2.001	1.994
1986	1.571	1.616	1.641	1.679	1.724	1.782	1.839	1.892	1.964	1.957
1987	1.516	1.559	1.584	1.620	1.663	1.719	1.775	1.825	1.895	1.889
1988	1.456	1.497	1.521	1.555	1.597	1.651	1.704	1.753	1.820	1.813
1989	1.389	1.428	1.451	1.484	1.523	1.575	1.626	1.672	1.736	1.730
1990	1.318	1.355	1.376	1.408	1.445	1.494	1.542	1.586	1.647	1.641
1991	1.264	1.300	1.321	1.351	1.387	1.434	1.480	1.522	1.581	1.575
1992	1.227	1.262	1.282	1.311	1.346	1.392	1.437	1.478	1.535	1.529
1993	1.192	1.226	1.245	1.273	1.307	1.352	1.395	1.435	1.490	1.485
1994	1.162	1.195	1.214	1.242	1.275	1.318	1.360	1.399	1.453	1.448
1995	1.130	1.162	1.180	1.207	1.240	1.281	1.323	1.360	1.413	1.408
1996	1.098	1.129	1.147	1.173	1.204	1.245	1.285	1.321	1.372	1.367
1997	1.073	1.103	1.121	1.146	1.177	1.217	1.256	1.292	1.341	1.337
1998	1.056	1.087	1.104	1.129	1.159	1.198	1.237	1.272	1.321	1.316
1999	1.034	1.063	1.080	1.104	1.134	1.172	1.210	1.245	1.292	1.288
2000	1.000	1.028	1.045	1.069	1.097	1.134	1.171	1.204	1.250	1.246
2001	0.972	1.000	1.016	1.039	1.067	1.103	1.138	1.171	1.216	1.211
2002	0.957	0.984	1.000	1.023	1.050	1.086	1.121	1.153	1.197	1.193
2003	0.936	0.963	0.978	1.000	1.027	1.061	1.096	1.127	1.170	1.166
2004	0.912	0.938	0.952	0.974	1.000	1.034	1.067	1.098	1.140	1.136
2005	0.882	0.907	0.921	0.942	0.967	1.000	1.032	1.062	1.102	1.098
2006	0.854	0.878	0.892	0.913	0.937	0.969	1.000	1.028	1.068	1.064
2007	0.831	0.854	0.868	0.887	0.911	0.942	0.972	1.000	1.038	1.035
2008	0.800	0.823	0.836	0.855	0.877	0.907	0.936	0.963	1.000	0.996
2009	0.803	0.825	0.839	0.858	0.881	0.910	0.940	0.966	1.004	1.000
2010	0.790	0.812	0.825	0.844	0.866	0.896	0.925	0.951	0.987	0.984
2011	0.766	0.787	0.800	0.818	0.840	0.868	0.896	0.922	0.957	0.954

Table B.17
Consumer Price Inflation (CPI) Index (Continued)

From:	2010	2011
1970	5.620	5.797
1971	5.384	5.554
1972	5.217	5.381
1973	4.911	5.066
1974	4.423	4.563
1975	4.053	4.181
1976	3.832	3.953
1977	3.598	3.712
1978	3.344	3.450
1979	3.004	3.098
1980	2.646	2.730
1981	2.399	2.475
1982	2.260	2.331
1983	2.189	2.258
1984	2.099	2.165
1985	2.027	2.091
1986	1.990	2.052
1987	1.920	1.980
1988	1.843	1.901
1989	1.759	1.814
1990	1.668	1.721
1991	1.601	1.652
1992	1.554	1.603
1993	1.509	1.557
1994	1.471	1.518
1995	1.431	1.476
1996	1.390	1.434
1997	1.359	1.401
1998	1.338	1.380
1999	1.309	1.350
2000	1.266	1.306
2001	1.231	1.270
2002	1.212	1.250
2003	1.185	1.222
2004	1.154	1.191
2005	1.117	1.152
2006	1.082	1.116
2007	1.052	1.085
2008	1.013	1.045
2009	1.016	1.048
2010	1.000	1.032
2011	0.969	1.000

Source:

U.S. Bureau of Labor Statistics.

Table B.18
Gross National Product Implicit Price Deflator

From:	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
1970	1.000	1.050	1.096	1.157	1.261	1.380	1.460	1.553	1.662	1.800
1971	0.952	1.000	1.043	1.102	1.201	1.315	1.391	1.479	1.583	1.714
1972	0.913	0.958	1.000	1.056	1.151	1.260	1.333	1.418	1.517	1.643
1973	0.864	0.908	0.947	1.000	1.090	1.193	1.262	1.342	1.437	1.556
1974	0.793	0.833	0.869	0.917	1.000	1.094	1.158	1.231	1.318	1.427
1975	0.724	0.761	0.794	0.838	0.914	1.000	1.058	1.125	1.204	1.304
1976	0.685	0.719	0.750	0.792	0.864	0.945	1.000	1.064	1.138	1.233
1977	0.644	0.676	0.705	0.745	0.812	0.889	0.940	1.000	1.070	1.159
1978	0.602	0.632	0.659	0.696	0.759	0.830	0.878	0.934	1.000	1.083
1979	0.555	0.583	0.609	0.643	0.701	0.767	0.811	0.863	0.923	1.000
1980	0.509	0.535	0.558	0.589	0.642	0.703	0.744	0.791	0.847	0.917
1981	0.466	0.489	0.510	0.539	0.587	0.643	0.680	0.723	0.774	0.838
1982	0.439	0.461	0.481	0.508	0.553	0.606	0.641	0.682	0.729	0.790
1983	0.422	0.443	0.462	0.488	0.532	0.583	0.616	0.656	0.702	0.760
1984	0.407	0.427	0.446	0.471	0.513	0.562	0.594	0.632	0.676	0.732
1985	0.395	0.415	0.433	0.457	0.498	0.545	0.576	0.613	0.656	0.711
1986	0.386	0.406	0.423	0.447	0.487	0.533	0.564	0.600	0.642	0.695
1987	0.376	0.395	0.412	0.435	0.474	0.519	0.549	0.584	0.625	0.677
1988	0.364	0.382	0.398	0.421	0.459	0.502	0.531	0.565	0.604	0.654
1989	0.350	0.368	0.384	0.405	0.442	0.483	0.511	0.544	0.582	0.631
1990	0.337	0.354	0.369	0.390	0.425	0.465	0.492	0.524	0.561	0.607
1991	0.326	0.342	0.357	0.377	0.411	0.450	0.476	0.506	0.542	0.587
1992	0.319	0.334	0.349	0.369	0.402	0.440	0.465	0.495	0.530	0.573
1993	0.311	0.327	0.341	0.360	0.393	0.430	0.455	0.483	0.517	0.560
1994	0.305	0.320	0.334	0.353	0.384	0.421	0.445	0.473	0.507	0.549
1995	0.299	0.314	0.327	0.346	0.377	0.412	0.436	0.464	0.497	0.538
1996	0.293	0.308	0.321	0.339	0.370	0.405	0.428	0.455	0.487	0.528
1997	0.288	0.303	0.316	0.334	0.364	0.398	0.421	0.448	0.479	0.519
1998	0.285	0.299	0.312	0.330	0.360	0.394	0.416	0.443	0.474	0.513
1999	0.281	0.295	0.308	0.325	0.355	0.388	0.410	0.437	0.467	0.506
2000	0.275	0.289	0.301	0.318	0.347	0.380	0.402	0.427	0.457	0.495
2001	0.269	0.282	0.294	0.311	0.339	0.371	0.392	0.417	0.447	0.484
2002	0.264	0.277	0.289	0.306	0.333	0.365	0.386	0.410	0.439	0.475
2003	0.259	0.272	0.283	0.299	0.326	0.357	0.378	0.402	0.430	0.465
2004	0.251	0.264	0.276	0.291	0.317	0.347	0.367	0.391	0.418	0.453
2005	0.244	0.256	0.267	0.282	0.308	0.337	0.356	0.379	0.406	0.439
2006	0.236	0.248	0.259	0.273	0.298	0.326	0.345	0.367	0.392	0.425
2007	0.230	0.241	0.252	0.266	0.290	0.317	0.335	0.357	0.382	0.413
2008	0.225	0.236	0.246	0.260	0.283	0.310	0.328	0.349	0.374	0.405
2009	0.221	0.232	0.242	0.256	0.279	0.306	0.323	0.344	0.368	0.399
2010	0.220	0.231	0.241	0.254	0.277	0.303	0.321	0.341	0.365	0.395
2011	0.215	0.225	0.235	0.248	0.271	0.296	0.313	0.333	0.357	0.386

Table B.18
Gross National Product Implicit Price Deflator (Continued)

From:	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
1970	1.963	2.148	2.279	2.369	2.458	2.533	2.589	2.660	2.751	2.855
1971	1.870	2.046	2.170	2.256	2.341	2.413	2.466	2.533	2.620	2.719
1972	1.792	1.960	2.080	2.162	2.244	2.312	2.363	2.428	2.510	2.606
1973	1.697	1.857	1.970	2.048	2.125	2.190	2.238	2.299	2.378	2.468
1974	1.557	1.703	1.807	1.879	1.949	2.009	2.053	2.109	2.181	2.264
1975	1.422	1.556	1.651	1.716	1.781	1.835	1.876	1.927	1.993	2.068
1976	1.344	1.471	1.561	1.623	1.683	1.735	1.773	1.822	1.884	1.955
1977	1.264	1.383	1.467	1.525	1.583	1.631	1.667	1.713	1.771	1.838
1978	1.181	1.292	1.371	1.425	1.479	1.524	1.557	1.600	1.655	1.717
1979	1.091	1.193	1.266	1.316	1.366	1.407	1.438	1.478	1.528	1.586
1980	1.000	1.094	1.161	1.207	1.252	1.290	1.319	1.355	1.401	1.454
1981	0.914	1.000	1.061	1.103	1.144	1.179	1.205	1.238	1.281	1.329
1982	0.861	0.943	1.000	1.040	1.079	1.112	1.136	1.167	1.207	1.253
1983	0.829	0.907	0.962	1.000	1.038	1.069	1.093	1.123	1.161	1.205
1984	0.799	0.874	0.927	0.964	1.000	1.031	1.053	1.082	1.119	1.161
1985	0.775	0.848	0.900	0.935	0.970	1.000	1.022	1.050	1.086	1.127
1986	0.758	0.830	0.880	0.915	0.950	0.978	1.000	1.027	1.063	1.103
1987	0.738	0.808	0.857	0.891	0.924	0.952	0.973	1.000	1.034	1.073
1988	0.714	0.781	0.828	0.861	0.894	0.921	0.941	0.967	1.000	1.038
1989	0.688	0.752	0.798	0.830	0.861	0.887	0.907	0.932	0.963	1.000
1990	0.662	0.724	0.768	0.799	0.829	0.854	0.873	0.897	0.928	0.963
1991	0.640	0.700	0.743	0.772	0.801	0.825	0.844	0.867	0.896	0.930
1992	0.625	0.684	0.726	0.755	0.783	0.807	0.825	0.847	0.876	0.909
1993	0.611	0.669	0.709	0.738	0.765	0.789	0.806	0.828	0.856	0.889
1994	0.598	0.655	0.695	0.722	0.749	0.772	0.789	0.811	0.838	0.870
1995	0.586	0.642	0.681	0.708	0.734	0.757	0.773	0.794	0.822	0.853
1996	0.575	0.630	0.668	0.694	0.721	0.743	0.759	0.780	0.806	0.837
1997	0.566	0.619	0.657	0.683	0.709	0.730	0.746	0.767	0.793	0.823
1998	0.560	0.613	0.650	0.676	0.701	0.722	0.738	0.759	0.784	0.814
1999	0.552	0.604	0.641	0.666	0.691	0.712	0.728	0.748	0.773	0.803
2000	0.540	0.591	0.627	0.652	0.676	0.697	0.712	0.732	0.757	0.785
2001	0.528	0.577	0.612	0.637	0.660	0.681	0.696	0.715	0.739	0.767
2002	0.518	0.567	0.602	0.626	0.649	0.669	0.684	0.702	0.726	0.754
2003	0.508	0.555	0.589	0.613	0.636	0.655	0.669	0.688	0.711	0.738
2004	0.494	0.540	0.573	0.596	0.618	0.637	0.651	0.669	0.692	0.718
2005	0.479	0.524	0.556	0.578	0.600	0.618	0.632	0.649	0.671	0.697
2006	0.463	0.507	0.538	0.559	0.580	0.598	0.611	0.628	0.649	0.674
2007	0.451	0.493	0.523	0.544	0.564	0.582	0.594	0.611	0.632	0.656
2008	0.441	0.483	0.512	0.533	0.533	0.569	0.582	0.598	0.618	0.642
2009	0.435	0.476	0.505	0.525	0.544	0.561	0.573	0.590	0.610	0.633
2010	0.431	0.472	0.501	0.520	0.540	0.556	0.569	0.585	0.605	0.628
2011	0.422	0.461	0.489	0.509	0.528	0.544	0.556	0.572	0.591	0.614

Table B.18
Gross National Product Implicit Price Deflator (Continued)

From:	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1970	2.966	3.069	3.140	3.212	3.281	3.348	3.412	3.468	3.507	3.557
1971	2.824	2.923	2.990	3.059	3.124	3.189	3.249	3.303	3.340	3.388
1972	2.707	2.801	2.865	2.932	2.994	3.056	3.114	3.165	3.200	3.247
1973	2.563	2.653	2.714	2.777	2.836	2.894	2.949	2.998	3.031	3.075
1974	2.351	2.433	2.489	2.547	2.601	2.655	2.705	2.750	2.780	2.821
1975	2.148	2.224	2.274	2.327	2.377	2.426	2.472	2.513	2.540	2.577
1976	2.031	2.102	2.150	2.200	2.247	2.293	2.336	2.375	2.401	2.436
1977	1.909	1.976	2.021	2.068	2.112	2.156	2.197	2.233	2.258	2.290
1978	1.784	1.846	1.889	1.932	1.974	2.014	2.052	2.086	2.109	2.140
1979	1.647	1.705	1.744	1.785	1.822	1.860	1.895	1.927	1.948	1.976
1980	1.510	1.563	1.599	1.636	1.671	1.705	1.738	1.767	1.786	1.812
1981	1.381	1.429	1.462	1.496	1.527	1.559	1.588	1.615	1.633	1.656
1982	1.301	1.347	1.378	1.410	1.440	1.469	1.497	1.522	1.539	1.561
1983	1.252	1.295	1.325	1.356	1.385	1.413	1.440	1.464	1.480	1.501
1984	1.206	1.249	1.277	1.307	1.335	1.362	1.388	1.411	1.426	1.447
1985	1.171	1.212	1.239	1.268	1.295	1.322	1.347	1.369	1.384	1.404
1986	1.145	1.186	1.213	1.241	1.267	1.293	1.318	1.340	1.354	1.374
1987	1.115	1.154	1.180	1.208	1.233	1.259	1.283	1.304	1.318	1.337
1988	1.078	1.116	1.141	1.168	1.193	1.217	1.240	1.261	1.275	1.293
1989	1.039	1.075	1.100	1.125	1.149	1.173	1.195	1.215	1.228	1.246
1990	1.000	1.035	1.059	1.083	1.106	1.129	1.150	1.170	1.182	1.200
1991	0.966	1.000	1.023	1.047	1.069	1.091	1.112	1.130	1.143	1.159
1992	0.945	0.978	1.000	1.023	1.045	1.066	1.087	1.105	1.117	1.133
1993	0.923	0.955	0.977	1.000	1.021	1.042	1.062	1.080	1.092	1.107
1994	0.904	0.935	0.957	0.979	1.000	1.021	1.040	1.057	1.069	1.084
1995	0.886	0.917	0.938	0.959	0.980	1.000	1.019	1.036	1.047	1.062
1996	0.869	0.900	0.920	0.942	0.962	0.981	1.000	1.017	1.028	1.043
1997	0.855	0.885	0.905	0.926	0.946	0.965	0.984	1.000	1.011	1.026
1998	0.846	0.875	0.895	0.916	0.936	0.955	0.973	0.989	1.000	1.014
1999	0.834	0.863	0.883	0.903	0.922	0.941	0.959	0.975	0.986	1.000
2000	0.816	0.844	0.864	0.884	0.903	0.921	0.939	0.954	0.965	0.979
2001	0.797	0.825	0.844	0.863	0.882	0.900	0.917	0.932	0.942	0.956
2002	0.783	0.811	0.829	0.848	0.866	0.884	0.901	0.916	0.926	0.939
2003	0.767	0.794	0.812	0.831	0.848	0.866	0.882	0.897	0.907	0.920
2004	0.746	0.772	0.789	0.808	0.825	0.842	0.858	0.872	0.882	0.894
2005	0.724	0.749	0.766	0.784	0.801	0.817	0.833	0.846	0.856	0.868
2006	0.700	0.724	0.741	0.758	0.774	0.790	0.805	0.819	0.828	0.840
2007	0.681	0.705	0.721	0.738	0.753	0.769	0.783	0.796	0.805	0.817
2008	0.667	0.690	0.706	0.722	0.737	0.753	0.767	0.780	0.788	0.800
2009	0.658	0.681	0.697	0.713	0.728	0.743	0.757	0.770	0.779	0.790
2010	0.652	0.676	0.692	0.707	0.722	0.737	0.751	0.764	0.773	0.784
2011	0.637	0.660	0.676	0.691	0.705	0.720	0.734	0.747	0.755	0.766

Table B.18
Gross National Product Implicit Price Deflator (Continued)

From:	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1970	3.635	3.722	3.787	3.867	3.977	4.097	4.237	4.355	4.449	4.517
1971	3.462	3.544	3.606	3.683	3.787	3.902	4.035	4.147	4.237	4.302
1972	3.317	3.397	3.456	3.529	3.630	3.739	3.867	3.975	4.061	4.124
1973	3.142	3.217	3.273	3.343	3.438	3.542	3.662	3.764	3.846	3.907
1974	2.882	2.951	3.002	3.066	3.153	3.249	3.359	3.453	3.528	3.582
1975	2.633	2.696	2.743	2.802	2.881	2.968	3.069	3.155	3.223	3.273
1976	2.489	2.549	2.593	2.648	2.723	2.806	2.901	2.982	3.047	3.094
1977	2.340	2.396	2.438	2.490	2.561	2.638	2.728	2.804	2.865	2.909
1978	2.186	2.239	2.278	2.326	2.392	2.465	2.548	2.620	2.676	2.718
1979	2.019	2.067	2.103	2.148	2.209	2.276	2.353	2.419	2.472	2.509
1980	1.851	1.896	1.929	1.970	2.026	2.087	2.158	2.218	2.266	2.300
1981	1.692	1.733	1.763	1.800	1.852	1.908	1.972	2.027	2.071	2.103
1982	1.595	1.633	1.662	1.697	1.745	1.798	1.859	1.911	1.952	1.982
1983	1.534	1.571	1.598	1.632	1.679	1.729	1.788	1.838	1.878	1.906
1984	1.479	1.514	1.540	1.573	1.618	1.667	1.723	1.772	1.810	1.837
1985	1.435	1.469	1.495	1.527	1.570	1.617	1.672	1.719	1.756	1.783
1986	1.404	1.438	1.463	1.494	1.536	1.583	1.636	1.682	1.719	1.745
1987	1.366	1.399	1.424	1.454	1.495	1.540	1.593	1.637	1.673	1.695
1988	1.321	1.353	1.377	1.406	1.446	1.490	1.540	1.583	1.617	1.639
1989	1.273	1.304	1.326	1.355	1.393	1.435	1.484	1.525	1.558	1.579
1990	1.226	1.255	1.277	1.304	1.341	1.382	1.429	1.468	1.500	1.520
1991	1.184	1.213	1.234	1.260	1.296	1.335	1.380	1.419	1.450	1.468
1992	1.158	1.185	1.206	1.232	1.267	1.305	1.349	1.387	1.417	1.434
1993	1.131	1.159	1.179	1.204	1.238	1.275	1.319	1.356	1.385	1.403
1994	1.108	1.134	1.154	1.179	1.212	1.249	1.291	1.327	1.356	1.374
1995	1.086	1.112	1.131	1.155	1.188	1.224	1.265	1.301	1.329	1.346
1996	1.065	1.091	1.110	1.134	1.166	1.201	1.242	1.276	1.304	1.321
1997	1.048	1.073	1.092	1.115	1.147	1.181	1.222	1.256	1.283	1.298
1998	1.037	1.061	1.080	1.103	1.134	1.168	1.208	1.242	1.269	1.284
1999	1.022	1.046	1.064	1.087	1.118	1.152	1.191	1.224	1.251	1.265
2000	1.000	1.024	1.042	1.064	1.094	1.127	1.166	1.198	1.224	1.238
2001	0.977	1.000	1.017	1.039	1.069	1.101	1.138	1.170	1.195	1.211
2002	0.960	0.983	1.000	1.021	1.050	1.082	1.119	1.150	1.175	1.192
2003	0.940	0.962	0.979	1.000	1.028	1.059	1.096	1.126	1.150	1.167
2004	0.914	0.936	0.952	0.972	1.000	1.030	1.065	1.095	1.118	1.134
2005	0.887	0.908	0.924	0.944	0.970	1.000	1.031	1.060	1.083	1.098
2006	0.858	0.878	0.894	0.913	0.939	0.969	1.000	1.027	1.049	1.063
2007	0.835	0.855	0.870	0.888	0.914	0.943	0.974	1.000	1.022	1.033
2008	0.817	0.837	0.851	0.869	0.894	0.923	0.953	0.979	1.000	1.012
2009	0.808	0.826	0.839	0.857	0.882	0.911	0.941	0.968	0.988	1.000
2010	0.801	0.819	0.832	0.850	0.875	0.904	0.933	0.961	0.982	0.991
2011	0.783	0.800	0.813	0.830	0.854	0.882	0.911	0.937	0.958	0.968

Table B.18
Gross National Product Implicit Price Deflator (Continued)

From:	2010	2011
1970	4.554	4.658
1971	4.337	4.436
1972	4.157	4.253
1973	3.938	4.029
1974	3.611	3.694
1975	3.299	3.375
1976	3.119	3.192
1977	2.932	3.000
1978	2.740	2.804
1979	2.530	2.588
1980	2.318	2.372
1981	2.120	2.169
1982	1.998	2.044
1983	1.922	1.966
1984	1.852	1.895
1985	1.797	1.839
1986	1.759	1.800
1987	1.709	1.749
1988	1.652	1.691
1989	1.592	1.629
1990	1.533	1.569
1991	1.480	1.515
1992	1.446	1.480
1993	1.415	1.448
1994	1.385	1.418
1995	1.357	1.389
1996	1.332	1.363
1997	1.309	1.340
1998	1.294	1.325
1999	1.275	1.305
2000	1.248	1.278
2001	1.221	1.249
2002	1.201	1.230
2003	1.176	1.204
2004	1.144	1.171
2005	1.107	1.134
2006	1.072	1.098
2007	1.041	1.067
2008	1.019	1.044
2009	1.010	1.033
2010	1.000	1.021
2011	0.979	1.000

Source:

U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, Washington, DC, monthly.