Study Guide for

Reteaching and Practice

by Kay Thompson

Algebra and Trigonometry

Structure and Method Book 2

Brown
Dolciani
Sorgenfrey
Kane

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Symbols

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$\{\ \}$	set	1
$\in$	is an element of	
$=$	equals *or* is equal to	1
$>$	is greater than	1
$<$	is less than	1
$\lvert a \rvert$	absolute value of a	1
$-a$	additive inverse of a *or* opposite of a	1
$\stackrel{?}{=}$	is equal to?	13
$\neq$	does not equal	13
$\therefore$	therefore	13
$\emptyset$	empty set *or* null set	13
$\geq$	is greater than or equal to	21
$\leq$	is less than or equal to	21
$a<x<b$	x is greater than a and less than b *or* x is between a and b	21
$P(a, b)$	point P with coordinates (a, b)	35
x_1	x sub 1	37
$f(x)$	f of x *or* the value of f at x	47
a^n	nth power of a	55
$\approx$	is approximately equal to	75
$\pm$	plus-or-minus sign	89
$\sqrt[n]{b}$	nth root of b	89
i	imaginary unit ($i^2 = -1$)	101
$b^{1/n}$	nth root of b	155
$b^{p/q}$	qth root of the pth power of b	155

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f^{-1}	inverse function of f	159
$\log_b N$	logarithm base b of N	161
$\ln x$	natural logarithm of x *or* logarithm base e of x	169
t_n	nth term of a sequence	171
Σ	summation sign	177
∞	infinity	177
S_n	sum of the first n terms of a series	179
$!$	factorial	185
$^\circ$	degree	187
$'$	minute	187
$''$	second	187
$\overrightarrow{AB}$	vector AB	223
$\lVert \mathbf{v} \rVert$	norm of vector $\mathbf{v}$	223
Cos^{-1}	inverse cosine *or* Arc cosine	233
σ	standard deviation	241
r	correlation coefficient	245
${}_nP_r$	number of permutations of n elements taken r at a time	249
${}_nC_r$	number of combinations of n elements taken r at a time	251
$P(E)$	probability of event E	255
$\cap$	intersection	257
$\cup$	union	257
$\overline{A}$	complement of event A	257
$A_{m\times n}$	matrix A with m rows and n columns	259
$\det A$	determinant of matrix A	267
A^{-1}	inverse of matrix A	269

Greek letters: α, β, γ, θ, π, σ, ϕ, ω *alpha, beta, gamma, theta, pi, sigma, phi, omega*

Table of Measures

	Metric Units		
Length	10 millimeters (mm)	=	1 centimeter (cm)
	100 centimeters 1000 millimeters	=	1 meter (m)
	1000 meters	=	1 kilometer (km)
Area	100 square millimeters (mm^2)	=	1 square centimeter (cm^2)
	10,000 square centimeters	=	1 square meter (m^2)
Volume	1000 cubic millimeters (mm^3)	=	1 cubic centimeter (cm^3)
	1,000,000 cubic centimeters	=	1 cubic meter (m^3)
Liquid Capacity	1000 milliliters (mL)	=	1 liter (L)
	1000 cubic centimeters	=	1 liter
Mass	1000 milligrams (mg)	=	1 gram (g)
	1000 grams	=	1 kilogram (kg)
Temperature in degrees Celsius (°C)	0°C	=	freezing point of water
	100°C	=	boiling point of water
	United States Customary Units		
Length	12 inches (in.)	=	1 foot (ft)
	36 inches 3 feet	=	1 yard (yd)
	5280 feet 1760 yards	=	1 mile (mi)
Area	144 square inches ($in.^2$)	=	1 square foot (ft^2)
	9 square feet	=	1 square yard (yd^2)
Volume	1728 cubic inches ($in.^3$)	=	1 cubic foot (ft^3)
	27 cubic feet	=	1 cubic yard (yd^3)
Liquid Capacity	16 fluid ounces (fl oz)	=	1 pint (pt)
	2 pints	=	1 quard (qt)
	4 quarts	=	1 gallon (gal)
Weight	16 ounces (oz)	=	1 pound (lb)
Temperature in degrees Fahrenheit (°F)	32°F	=	freezing point of water
	212°F	=	boiling point of water
	Time		
	60 seconds (s)	=	1 minute (min)
	60 minutes	=	1 hour (h)