

# THE QUARTER MILE™ MATH

Math Practice Software Kids Love!™

## Topics Progress Chart

Kindergarten through pre-algebra (9th grade)

323 topics in the entire product line

Over 70,000 problems

Student: \_\_\_\_\_



**BARNUM SOFTWARE™**

[www.TheQuarterMile.com](http://www.TheQuarterMile.com)

800-553-9155

Copyright 2009. All rights reserved.

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
<b>Numbers and letters</b>				
<b>Keyboarding topics</b>				
✓			<input type="checkbox"/>	Keyboarding: one-digit numbers
✓			<input type="checkbox"/>	Keyboarding: two-digit numbers
✓			<input type="checkbox"/>	Keyboarding: the alphabet
✓			<input type="checkbox"/>	Double consonants
<b>Learning the alphabet topics</b>				
✓			<input type="checkbox"/>	Find the next letter: A, B, ?
✓			<input type="checkbox"/>	Find the second letter after
✓			<input type="checkbox"/>	Find the previous letter
✓			<input type="checkbox"/>	Vowel or consonant?
<b>Counting topics</b>				
✓			<input type="checkbox"/>	Counting forward: level 1
✓			<input type="checkbox"/>	Counting forward: level 2
✓			<input type="checkbox"/>	Counting backward: level 1
✓			<input type="checkbox"/>	Counting backward: level 2
✓			<input type="checkbox"/>	Counting by 2, 3, 5, 10
✓			<input type="checkbox"/>	Counting by 4, 6, 7, 8, 9
<b>Numbers topics</b>				
✓			<input type="checkbox"/>	Words to numerals
✓			<input type="checkbox"/>	Greater than / less than: level 1
✓			<input type="checkbox"/>	Greater than / less than: level 2
✓			<input type="checkbox"/>	Find the largest number: level 1
✓			<input type="checkbox"/>	Find the largest number: level 2
✓			<input type="checkbox"/>	Make the smallest number
✓			<input type="checkbox"/>	Make the largest number
✓			<input type="checkbox"/>	Even and odd?
<b>Place value topics</b>				
✓			<input type="checkbox"/>	Ones, tens, hundreds and up
✓			<input type="checkbox"/>	Naming column headings
<b>Whole Numbers</b>				
<b>Grouping / regrouping topics</b>				
✓			<input type="checkbox"/>	Regrouping: level 1
✓			<input type="checkbox"/>	Regrouping: level 2
✓			<input type="checkbox"/>	Grouping
<b>Doubling / halving topics</b>				
✓			<input type="checkbox"/>	Doubling: level 1
✓			<input type="checkbox"/>	Doubling: level 2
✓			<input type="checkbox"/>	Halving: level 1
✓			<input type="checkbox"/>	Halving: level 2
<b>Twins and neighbors topics</b>				
✓			<input type="checkbox"/>	Adding twins and neighbors: level 1
✓			<input type="checkbox"/>	Adding twins and neighbors: level 2
✓			<input type="checkbox"/>	Sub twins and neighbors: level 1
✓			<input type="checkbox"/>	Sub twins and neighbors: level 2

Level 1 = Grades K-3  
 Level 2 = Grades 4-6  
 Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
✓			<input type="checkbox"/>	<b>Addition topics</b>
✓			<input type="checkbox"/>	Adding 0's
✓			<input type="checkbox"/>	Adding 1's
✓			<input type="checkbox"/>	Adding 2's
✓			<input type="checkbox"/>	Adding 3's
✓			<input type="checkbox"/>	Adding 4's
✓			<input type="checkbox"/>	Adding 5's
✓			<input type="checkbox"/>	Adding 6's
✓			<input type="checkbox"/>	Adding 7's
✓			<input type="checkbox"/>	Adding 8's
✓			<input type="checkbox"/>	Adding 9's
✓			<input type="checkbox"/>	Adding 10's
✓			<input type="checkbox"/>	Addition: 0 + 0 through 1 + 1
✓			<input type="checkbox"/>	Addition: 0 + 0 through 2 + 2
✓			<input type="checkbox"/>	Addition: 0 + 0 through 3 + 3
✓			<input type="checkbox"/>	Addition: 0 + 0 through 4 + 4
✓	✓		<input type="checkbox"/>	Addition: 0 + 0 through 5 + 5
✓			<input type="checkbox"/>	Addition: 0 + 0 through 6 + 6
✓			<input type="checkbox"/>	Addition: 0 + 0 through 7 + 7
✓			<input type="checkbox"/>	Addition: 0 + 0 through 8 + 8
✓			<input type="checkbox"/>	Addition: 0 + 0 through 9 + 9
✓	✓		<input type="checkbox"/>	Addition: 0 + 0 through 10 + 10
✓	✓		<input type="checkbox"/>	Addition: 0 + 0 through 20 + 20
✓	✓		<input type="checkbox"/>	Addition: 0 + 0 through 200 + 90
			<input type="checkbox"/>	<b>Subtraction topics</b>
✓			<input type="checkbox"/>	Subtracting 0's
✓			<input type="checkbox"/>	Subtracting 1's
✓			<input type="checkbox"/>	Subtracting 2's
✓			<input type="checkbox"/>	Subtracting 3's
✓			<input type="checkbox"/>	Subtracting 4's
✓			<input type="checkbox"/>	Subtracting 5's
✓			<input type="checkbox"/>	Subtracting 6's
✓			<input type="checkbox"/>	Subtracting 7's
✓			<input type="checkbox"/>	Subtracting 8's
✓			<input type="checkbox"/>	Subtracting 9's
✓			<input type="checkbox"/>	Subtracting 10's
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 2 - 1
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 4 - 2
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 6 - 3
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 8 - 4
✓	✓		<input type="checkbox"/>	Subtraction: 0 - 0 through 10 - 5
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 12 - 6
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 14 - 7
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 16 - 8
✓			<input type="checkbox"/>	Subtraction: 0 - 0 through 18 - 9
✓	✓		<input type="checkbox"/>	Subtraction: 0 - 0 through 20 - 10
✓	✓		<input type="checkbox"/>	Subtraction: 0 - 0 through 20 - 20
✓	✓		<input type="checkbox"/>	Subtraction: 0 - 0 through 200 - 200

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
				<b>Whole Numbers</b>
				<b>Multiplication topics</b>
✓	✓		<input type="checkbox"/>	Multiplication: 1's tables
✓	✓		<input type="checkbox"/>	Multiplication: 2's tables
✓	✓		<input type="checkbox"/>	Multiplication: 3's tables
✓	✓		<input type="checkbox"/>	Multiplication: 4's tables
✓	✓		<input type="checkbox"/>	Multiplication: 5's tables
✓	✓		<input type="checkbox"/>	Multiplication: 6's tables
✓	✓		<input type="checkbox"/>	Multiplication: 7's tables
✓	✓		<input type="checkbox"/>	Multiplication: 8's tables
✓	✓		<input type="checkbox"/>	Multiplication: 9's tables
✓	✓		<input type="checkbox"/>	Multiplication: 10's tables
✓	✓		<input type="checkbox"/>	Multiplication: 11's tables
✓	✓		<input type="checkbox"/>	Multiplication: 12's tables
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 2 x 2
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 3 x 3
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 4 x 4
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 5 x 5
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 6 x 6
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 7 x 7
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 8 x 8
✓	✓		<input type="checkbox"/>	Multiplication: 0 x 0 through 9 x 9
✓	✓		<input type="checkbox"/>	Multiplication: 1 x 1 through 10 x 10
✓	✓		<input type="checkbox"/>	Multiplication: 1 x 1 through 11 x 11
✓	✓		<input type="checkbox"/>	Multiplication: 1 x 1 through 12 x 12
✓	✓		<input type="checkbox"/>	Multiplication: 2 x 2 through 25 x 25
				<b>Division topics</b>
✓	✓		<input type="checkbox"/>	Dividing by 1's
✓	✓		<input type="checkbox"/>	Dividing by 2's
✓	✓		<input type="checkbox"/>	Dividing by 3's
✓	✓		<input type="checkbox"/>	Dividing by 4's
✓	✓		<input type="checkbox"/>	Dividing by 5's
✓	✓		<input type="checkbox"/>	Dividing by 6's
✓	✓		<input type="checkbox"/>	Dividing by 7's
✓	✓		<input type="checkbox"/>	Dividing by 8's
✓	✓		<input type="checkbox"/>	Dividing by 9's
✓	✓		<input type="checkbox"/>	Dividing by 10's
✓	✓		<input type="checkbox"/>	Dividing by 11's
✓	✓		<input type="checkbox"/>	Dividing by 12's
✓	✓		<input type="checkbox"/>	Division: 0 ÷ 1 through 4 ÷ 2
✓	✓		<input type="checkbox"/>	Division: 0 ÷ 1 through 9 ÷ 3
✓	✓		<input type="checkbox"/>	Division: 0 ÷ 1 through 16 ÷ 4
✓	✓		<input type="checkbox"/>	Division: 0 ÷ 1 through 25 ÷ 5

*(Division continues next column)*

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
✓	✓			(Division continued)
✓	✓			Division: $0 \div 1$ through $36 \div 6$
✓	✓			Division: $0 \div 1$ through $49 \div 7$
✓	✓			Division: $0 \div 1$ through $64 \div 8$
✓	✓			Division: $0 \div 1$ through $81 \div 9$
✓	✓			Division: $4 \div 2$ through $100 \div 10$
✓	✓			Division: $4 \div 2$ through $121 \div 11$
✓	✓			Division: $4 \div 2$ through $144 \div 12$
✓	✓			Division: $4 \div 2$ through $200 \div 20$
<b>Combination facts topics</b>				
✓	✓			Add and sub through the 10's
✓	✓			Mul and div through the 10's
✓	✓			Add / sub / mul / div combination
✓	✓			Mixed operations ( $2 + 3 \times 4 - 1$ )
<b>Important 10's facts topics</b>				
✓	✓			Making 10's with two numbers
✓	✓			10 minus
✓	✓			Making 10's with three numbers
✓	✓			Two numbers subtracted from 10
<b>Missing number topics</b>				
✓				Missing number: adding
✓				Missing number: subtracting
✓				Missing number: multiplying
✓				Missing number: dividing
✓				Missing number: combination
<b>Missing operator / operators topics</b>				
✓	✓			One operator: add / sub
✓	✓			One operator: add / sub / mul / div
✓	✓			Two operators: add / sub
✓	✓			Two operators: add / sub / mul
<b>Rounding topics</b>				
✓	✓			Rounding to the nearest 10
✓	✓			Rounding to the nearest 100
✓	✓			Rounding to the nearest 1000
<b>Powers of 10 topics</b>				
	✓			The basics (no exponents)
	✓			Exponent equivalents
	✓			Multiplying with exponents
	✓			Find the exponent: mul
	✓			Find the exponent: mul / div
	✓			Identifying big numbers

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
				<b>Squares topics</b>
✓	✓		○	Squares through $12 \times 12$
✓	✓		○	Squares through $20 \times 20$
✓	✓		○	Squares through $25 \times 25$
✓	✓		○	Exponents
	✓		○	<b>Mean (average), mode, median</b>
	✓		○	Mean: level 1
	✓		○	Mean: level 2
	✓		○	Mean: level 3
	✓		○	Mean, mode, and median
	✓		○	<b>Bases 2 and base 16 topics</b>
	✓		○	Base 10 to base 2
	✓		○	Base 2 to base 10
	✓		○	Base 10 and 16: equivalents
	✓		○	Base 10 to base 16
	✓		○	Base 16 to base 10

## Fraction Introduction

	✓		○	<b>Divisibility, prime number topics</b>
	✓		○	Divisibility by 2, 3 and 5
	✓		○	Divisibility by 2, 3, 4, 5 and 6
	✓		○	Prime numbers
	✓		○	<b>GCF, LCM and LCD topics</b>
	✓		○	Greatest common factor
	✓		○	Greatest common factor: advanced
	✓		○	Least common multiple
	✓		○	Least common multiple: advanced
	✓		○	Least common denominator
	✓		○	Least common denominator: advanced
	✓		○	<b>Reducing, converting, etc. topics</b>
	✓		○	Reducing fractions
	✓		○	Reducing fractions: advanced
	✓		○	Converting improper fractions to mixed
	✓		○	Converting mixed fractions to improper
	✓		○	<b>Proportions, etc. topics</b>
	✓		○	Proportions
	✓		○	Proportions—advanced
	✓		○	Simplest form (reduced and mixed)
	✓		○	Comparing fractions
	✓		○	Fraction topics combination
<b>Fractions</b>				
	✓		○	<b>Computing with like fractions topics</b>
	✓		○	Fractions: adding likes
	✓		○	Fractions: adding likes—advanced
				<i>(Fractions continues next column)</i>

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
				<i>(Fractions continued)</i>
	✓		○	Fractions: subtracting likes
	✓		○	Fractions: adding and subtracting likes
				<b>Computing with fractions topics</b>
	✓		○	Fractions: adding
	✓		○	Fractions: subtracting
	✓		○	Fractions: adding and subtracting
	✓		○	Fractions: multiplying (proper)
	✓		○	Fractions: multiplying
	✓		○	Fractions: dividing
	✓		○	Fractions: multiplying and dividing
	✓		○	Fractions: add / sub / mul / div
				<b>Decimals</b>
				<b>Naming and rounding decimals topics</b>
	✓		○	Decimals: naming
	✓		○	Decimals: rounding
				<b>Decimal computing topics: level 1</b>
	✓		○	Decimals: adding
	✓		○	Decimals: subtracting
	✓		○	Decimals: adding and subtracting
	✓		○	Decimals: multiplying
	✓		○	Decimals: dividing
	✓		○	Decimals: multiplying and dividing
	✓		○	Decimals: add / sub / mul / div
				<b>Decimal computing topics: level 2</b>
	✓	✓	○	Decimals: advanced—adding
	✓	✓	○	Decimals: advanced—subtracting
	✓	✓	○	Decimals: advanced—add / sub
	✓	✓	○	Decimals: advanced—multiplying
	✓	✓	○	Decimals: advanced—dividing
	✓	✓	○	Decimals: advanced—mul / div
	✓	✓	○	Decimals: advanced—add / sub / mul / div
				<b>Percents</b>
				<b>Converting topics</b>
	✓	✓	○	Converting fractions to percents
	✓	✓	○	Converting percents to fractions
	✓	✓	○	Converting fractions to decimals
	✓	✓	○	Converting decimals to fractions
	✓	✓	○	Converting between percents and decimals
	✓	✓	○	Converting percents, decimals and fractions
				<i>(Percents continues on next page)</i>

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
				(Percents continued)
				<b>Computing with percents topics</b>
	✓	✓	○	Estimating percents
	✓	✓	○	Finding 50%, 100% and 200% of a number
	✓	✓	○	Finding percents of numbers related to 100
	✓	✓	○	What is N% of B?
	✓	✓	○	A is what percent of B?
	✓	✓	○	A is N% of what number?
	✓	✓	○	Combination of percent computation topics

## Estimation Preparation

### Doubling, halving topics

Level 1	Level 2	Level 3	Practiced	
✓	✓		○	Doubling: level 1
✓	✓		○	Doubling: level 2
✓	✓		○	Halving: level 1
✓	✓		○	Halving: level 2
✓	✓		○	Multiplying by 2

"Estimation Preparation" topics and "Math Strategies" topics are designed to help students with estimation.

### Rounding topics

Level 1	Level 2	Level 3	Practiced	
✓	✓		○	Rounding to the nearest 10
✓	✓		○	Rounding to the nearest 100
✓	✓		○	Rounding to the nearest 1000
✓	✓		○	Rounding decimals

### Multiplication brush-up topics

Level 1	Level 2	Level 3	Practiced	
✓	✓		○	Squares through 12 x 12
✓	✓		○	Squares through 20 x 20
✓	✓		○	Squares through 25 x 25

### Converting and reducing topics

Level 1	Level 2	Level 3	Practiced	
	✓	✓	○	Converting fractions to decimals
	✓	✓	○	Converting decimals to fractions

## Math Strategies

### Multiplication and division strategies topics

Level 1	Level 2	Level 3	Practiced	
✓	✓		○	Multiplying by 4
✓	✓		○	Dividing by 4
✓	✓		○	Multiplying by 5
✓	✓		○	Multiplying by 11
	✓		○	Multiplying by 21
	✓		○	Multiplying by 25
	✓		○	Dividing by 25

### Advanced strategies topics

Level 1	Level 2	Level 3	Practiced	
	✓		○	Same 10's digits but 1's digits add to 10
	✓		○	Same 1's digits but 10's digits add to 10
	✓		○	Numbers differing by 2: level 1
	✓		○	Numbers differing by 2: level 2
	✓		○	Numbers differing by 2, 4, 6

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced	
<b>Estimation</b>				
<b>Estimating with whole numbers topics</b>				
✓			<input type="checkbox"/>	Addition: level 1
✓			<input type="checkbox"/>	Addition: level 2
✓			<input type="checkbox"/>	Subtraction
✓			<input type="checkbox"/>	Multiplication: level 1
✓			<input type="checkbox"/>	Multiplication: level 2
✓			<input type="checkbox"/>	Division: level 1
✓			<input type="checkbox"/>	Division: level 2
✓			<input type="checkbox"/>	Combination: level 1
✓			<input type="checkbox"/>	Combination: level 2
<b>Adding multiple numbers topics</b>				
✓	✓		<input type="checkbox"/>	Add multiple numbers: level 1
✓	✓		<input type="checkbox"/>	Add multiple numbers: level 2
<b>Estimating with fractions topics</b>				
	✓		<input type="checkbox"/>	1/2 of a number
	✓		<input type="checkbox"/>	1/3 of a number
	✓		<input type="checkbox"/>	1/4 of a number
	✓		<input type="checkbox"/>	1/5 of a number
	✓		<input type="checkbox"/>	Combination: level 1
	✓		<input type="checkbox"/>	Combination: level 2
	✓		<input type="checkbox"/>	Numerators greater than 1
<b>Estimating with decimals topics</b>				
	✓	✓	<input type="checkbox"/>	Finding a decimal: level 1
	✓	✓	<input type="checkbox"/>	Finding a decimal: level 2
	✓	✓	<input type="checkbox"/>	Finding a decimal: level 3
<b>Estimating with percents topics</b>				
	✓		<input type="checkbox"/>	50% of a number
	✓		<input type="checkbox"/>	33% of a number
	✓		<input type="checkbox"/>	25% of a number
	✓		<input type="checkbox"/>	20% of a number
	✓		<input type="checkbox"/>	Estimating a percent: combo level 1
	✓		<input type="checkbox"/>	Estimating a percent: combo level 2
<b>Special percent topics</b>				
	✓	✓	<input type="checkbox"/>	Changing a number by a percent: lev. 1
	✓	✓	<input type="checkbox"/>	Changing a number by a percent: lev. 2
	✓	✓	<input type="checkbox"/>	Changing a number by a percent: lev. 3
	✓	✓	<input type="checkbox"/>	Estimating the percent increase
<b>Estimating with money topics</b>				
	✓		<input type="checkbox"/>	Round to nearest dollar
	✓		<input type="checkbox"/>	Estimate total cost: level 1
	✓		<input type="checkbox"/>	Estimate total cost: level 2
	✓	✓	<input type="checkbox"/>	Estimating savings at sales

(Topic list continued on next page.)

Level 1 = Grades K-3

Level 2 = Grades 4-6

Level 3 = Grades 6-9



# TOPIC LIST

Level 1	Level 2	Level 3	Practiced		
					<b>Integers</b>
					<b>Integer introduction topics</b>
	✓	✓	○		Integers: comparing sizes
	✓	✓	○		Integers: signs only—add / sub
	✓	✓	○		Integers: signs only—mul / div
	✓	✓	○		Integers: signs only—add / sub / mul / div
					<b>Integer computing topics: level 1</b>
	✓	✓	○		Integers: adding
	✓	✓	○		Integers: subtracting
	✓	✓	○		Integers: adding and subtracting
	✓	✓	○		Integers: multiplying
	✓	✓	○		Integers: dividing
	✓	✓	○		Integers: multiplying and dividing
	✓	✓	○		Integers: add / sub / mul / div
					<b>Integer computing topics: level 2</b>
		✓	○		Integers: intermediate adding
		✓	○		Integers: intermediate subtracting
		✓	○		Integers: intermediate adding and subtracting
		✓	○		Integers: intermediate multiplying
		✓	○		Integers: intermediate dividing
		✓	○		Integers: intermediate multiplying and dividing
		✓	○		Integers: intermediate—add / sub / mul / div
					<b>Integer computing topics: level 3</b>
		✓	○		Integers: advanced adding and subtracting
		✓	○		Integers: advanced multiplying and dividing
		✓	○		Integers: mixed operations ( $-2 + 3 \times 4$ )

Single digit answers

The 10's facts

The 10's facts and beyond

## Equations

					<b>Equations introduction topics</b>
	✓	✓	○		Evaluating number phrases
	✓	✓	○		Evaluating with integers
	✓	✓	○		Simplifying number phrases
					<b>Equations with whole numbers topics</b>
		✓	○		Equations: whole numbers—adding . . . . . ( $a + 2 = 7$ )
		✓	○		Equations: whole numbers—subtracting . . . . . ( $a - 2 = 2$ )
		✓	○		Equations: whole numbers—adding and subtracting
		✓	○		Equations: whole numbers—multiplying . . . . . ( $2a = 18$ )
		✓	○		Equations: whole numbers—dividing . . . . . ( $a \div 2 = 8$ )
		✓	○		Equations: whole numbers—multiplying and dividing
		✓	○		Equations: whole numbers—add / sub / mul / div
		✓	○		Equations: whole numbers—two operations ( $2a + 1 = 7$ )
					<b>Equations with integers topics</b>
		✓	○		Equations: integers—adding . . . . . ( $a + 2 = -4$ )
		✓	○		Equations: integers—subtracting . . . . . ( $a - 3 = -2$ )
		✓	○		Equations: integers—adding and subtracting
		✓	○		Equations: integers—multiplying . . . . . ( $-3a = 15$ )
		✓	○		Equations: integers—dividing . . . . . ( $a \div 3 = -9$ )
		✓	○		Equations: integers—multiplying and dividing
		✓	○		Equations: integers—add / sub / mul / div
		✓	○		Equations: integers—two operations . . . . . ( $2a - 1 = -3$ )
		✓	○		Equations: fractional coefficients . . . . . ( $2 \times 8 = -4$ )