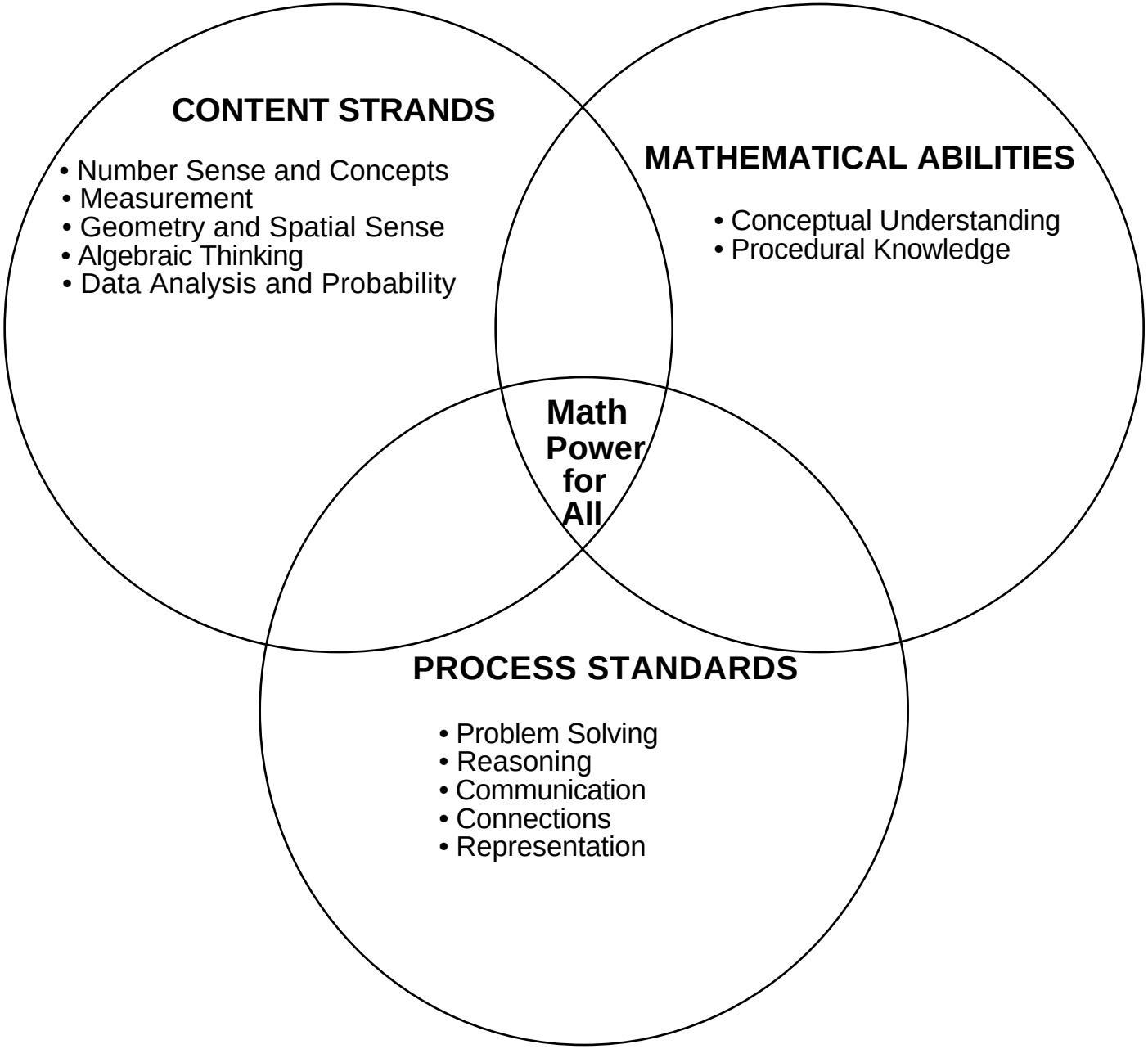
MATHEMATICAL POWER FOR ALL STUDENTS K-12

C.I.A.I.

• Curriculum • Instruction • Assessment • Improvement

Pinellas County Schools
Division of Curriculum and Instruction
Secondary Mathematics

MATHEMATICAL POWER FOR ALL STUDENTS K-12



CONTENT STRANDS

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 3

Number Sense, Concepts, and Operations

A122: relative size of numbers (pp 41-42)
A124: equivalent forms of numbers (p 49), includes A121 (names of numbers), A123 (concrete and symbolic representations of numbers)
A221: place value concepts (p 55)
A321: effects of operations on numbers (p 60)
A322: appropriate operation to solve a specific problem (p 64)
A323: appropriate methods of computing (p 68)
A421: estimation strategies (p 72) - includes B321 (estimates of measurements)
A521: basic number theory concepts including primes, composites, factors, and multiples (p 78)

Measurement

B122: real-world problems involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles (pp 82-83)
B221: direct and indirect measures (p 90)
B222: appropriate standard and nonstandard units of measurement (p 96) - includes B421 (which units to use with answers to real-world problems)
B422: appropriate instruments and technology to measure in real-world situations (pp 101-102)

Geometry and Spatial Sense

C121: appropriate geometric vocabulary to draw and describe 2- and 3-D shapes (p 108)
C221: spatial relationships, symmetry, reflections, congruency, and similarity (p 113), includes B122, C121, C321, (see chart)
C222: flips, slides, and turns (p 119)
C321: strategies, properties, and formulas to solve real-world problems involving 2- and 3-D shapes (pp 125-126), includes C221 (see chart)
C322: positive ordered pairs in a rectangular coordinate system (pp 134-135)

Algebraic Thinking

D121: patterns and relationships using models (pp 142-143)
D221: represent a given simple problem situation (pp 156-157), includes D222 (see chart)
D222: informal methods to solve equations and inequalities (p 163), includes D221 (see chart)

Data Analysis and Probability

E121: generate, collect, organize, display, and analyze data to solve problems (pp 170-171) - includes E123 (analyzes real world data)
E122: range, mean, median, and mode (p 183) - includes E123 (see E121)
E221: display possible outcomes using models (p 189)
E222: predict the likelihood of simple events occurring (p 194)

All FCAT math items at Grade 3 are tested in multiple choice format
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 4

A122: relative size of numbers (pp 43-44)
A124: equivalent forms of numbers (pp 50-51), includes A121 (names of numbers), A123 (concrete and symbolic representations of numbers)
A221: place value concepts (p 56)
A321: effects of operations on numbers (p 61)
A322: appropriate operation to solve a specific problem (p 65)
A323: appropriate methods of computing (p 69)
A421: estimation strategies (p 73) - includes B321 (estimates of measurements)
A521: basic number theory concepts including primes, composites, factors, and multiples (p 79)

Number Sense, Concepts, and Operations

B122: real-world problems involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles (pp 84-85)
B221: direct and indirect measures (p 91)
B222: appropriate standard and nonstandard units of measurement (pp 97-98) - includes B421 (which units to use with answers to real-world problems)
B422: appropriate instruments and technology to measure in real-world situations (pp 103-104)

Measurement

C121: appropriate geometric vocabulary to draw and describe 2- and 3-D shapes (p 109)
C221: spatial relationships, symmetry, reflections, congruency, and similarity (p 114), includes B122, C121, C321, (see chart)
C222: flips, slides, and turns (pp 120-121)
C321: strategies, properties, and formulas to solve real-world problems involving 2- and 3-D shapes (pp 127-128), includes C221 (see chart)
C322: positive ordered pairs in a rectangular coordinate system (p 136)

Geometry and Spatial Sense

D121: patterns and relationships using models (pp 144-145)
D221: represent a given simple problem situation (p 158), includes D222 (see chart)
D222: informal methods to solve equations and inequalities (pp 164-165), includes D221 (see chart)

Algebraic Thinking

E121: generate, collect, organize, display, and analyze data to solve problems (pp 172-173), includes E123 (analyzes real world data)
E122: range, mean, median, and mode (pp 184-185) - includes E123 (see E121)
E221: display possible outcomes using models (p 190)
E222: predict the likelihood of simple events occurring (p 195)

Data Analysis and Probability

All FCAT math items at Grade 4 are tested in multiple choice format
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 5

Number Sense, Concepts, and Operations

A122: relative size of numbers (MC, GR) pp 45-47
A124: equivalent forms of numbers (MC, GR) pp 52-53, includes A121 (names of numbers), A123 (concrete and symbolic representations of numbers)
A221: place value concepts (GR) pp 57-58
A321: effects of operations on numbers (MC) p 62
A322: appropriate operation to solve a specific problem (MC) p 66
A323: appropriate methods of computing (MC, GR) p 70
A421: estimation strategies (SR) pp 74-76, includes B321 (estimates of measurements)
A521: basic number theory concepts including primes, composites, factors, and multiples (MC) p 80

Measurement

B122: real-world problems involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles (MC, GR) pp 86-88
B221: direct and indirect measures (MC, GR) pp 92-94
B222: appropriate standard and nonstandard units of measurement (MC) p 99, includes B421 (which units to use with answers to real-world problems)
B422: appropriate instruments and technology to measure in real-world situations (MC) pp 105-106

Geometry and Spatial Sense

C121: appropriate geometric vocabulary to draw and describe 2- and 3-D shapes (SR) pp 110-111
C221: spatial relationships, symmetry, reflections, congruency, and similarity (MC, ER) pp 115-117, includes B122, C121, C321, (see chart)
C222: flips, slides, and turns (MC) pp 122-123
C321: strategies, properties, and formulas to solve real-world problems involving 2- and 3-D shapes (MC, SR) pp 129-132, includes C221 (see chart)
C322: positive ordered pairs in a rectangular coordinate system (MC, SR) pp 137-140

Algebraic Thinking

D121: patterns and relationships using models (MC, GR) pp 146-148
D122: generalize pattern, relation, or function to explain cause-and-effect (SR) pp 152-154, includes D121 (see chart)
D221: represent a given simple problem situation (MC, SR) pp 159-161, includes D222 (see chart)
D222: informal methods to solve equations and inequalities (MC, GR) pp 166-168, includes D221 (see chart)

Data Analysis and Probability

E121: generate, collect, organize, display, and analyze data to solve problems (MC, GR, ER) pp 174-181, includes E123 (analyzes real world data)
E122: range, mean, median, and mode (MC, GR) pp 186-187, includes E123 (see E121)
E221: display possible outcomes using models (SR) pp 191-192
E222: predict the likelihood of simple events occurring (MC) p 196
E321: collect, organize, analyze, and display data (MC, SR) pp 200-203, includes E322 (uses data to make predictions)

MC - multiple choice, GR - gridded response, SR - short response, ER - extended response
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 6

Number Sense, Concepts, and Operations

A132: relative size of numbers (MC) p 42
A134: equivalent forms of numbers (MC, GR) pp 47-48, includes A131 (verbal and word names for numbers), A133 (concrete and symbolic representations of numbers)
A231: exponential and scientific notation (MC, GR) pp 54-55
A331: effects of operations on numbers (MC) p 61
A332: order of operations (MC, GR) pp 65-66
A333: appropriate methods of computing (MC, GR) pp 72-73
A431: estimation strategies (MC) p 79, includes A421 (reasonableness of results), B231 (direct and indirect measurement), B331 (estimates of measurements)

Measurement

B131: derive formulas for perimeter, area, surface area, circumference, or volume (MC, GR) pp 84-86, includes B122 (grades 3-5, real world measurement problems), B231 (see A431)
B132: derive formulas for rate, distance, time, angle measures (MC, GR) p 96, includes B122 (see B131), B231 (see A431)
B133: impact of change in one dimension on other measurements (MC, GR) pp 103-105, includes C231 (see chart)
B134: real-world problems involving scale drawings (MC, GR) pp 113-115, includes B231 (see A431)
B232: real-world problems involving conversions within the metric or customary system (MC, GR) pp 122-123

Geometry and Spatial Sense

C131: relationships and properties among regular and irregular shapes (MC, GR) pp 129-131, includes C121 (grades 3-5, draw or describe 2- and 3-dimensional shapes)
C231: symmetry, reflections, congruency, similarity, perpendicularity, parallelism, and transformations (MC) pp 139-140, includes B133 (see chart), C121 (see C131), C131 (see chart), C331 (see chart)
C331: real-world and mathematical problems involving geometric properties and relationships (MC) pp 153-154, includes C231 (see chart)
C332: rectangular coordinate system and simple properties of lines (MC) pp 163-164

Algebraic Thinking

D131: patterns, relationships, and functions (MC, GR) pp 176-178, includes A531 (number sequences)
D132: cause-and-effect relationships (MC, GR) pp 185-186, includes A531 (see D131)
D231: algebraic expressions, equations, and inequalities (MC) p 197, includes A133 (see A134)
D232: linear equations and inequalities (MC, GR) pp 203-204

Data Analysis and Probability

E131: different ways of presenting data leading to different interpretations (MC, GR) pp 210-212, includes E133 (analyze and organize data in a quality display)
E132: measures of central tendency and range (MC, GR) pp 225-227, includes E133 (see E131)
E231: experimental results compared with mathematical expectations (MC) pp 235-236
E232: odds for and odds against a given situation (MC) p 243, includes E222 (grades 3-5, predicts likelihood of simple events occurring)
E331: inferences and conclusions based on statistics (MC) pp 248-249, includes E332 (common uses and misuses of statistics)

All FCAT math items at Grade 6 are tested in multiple choice (MC) or gridded response (GR) format
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 7

Number Sense, Concepts, and Operations

A132: relative size of numbers (MC) p 43
A134: equivalent forms of numbers (MC, GR) pp 49-50, includes A131 (verbal and word names for numbers), A133 (concrete and symbolic representations of numbers)
A231: exponential and scientific notation (MC, GR) pp 56-57
A331: effects of operations on numbers (MC) p 62
A332: order of operations (MC, GR) pp 67-68
A333: appropriate methods of computing (MC, GR) pp 74-75
A431: estimation strategies (MC) p 80, includes A421 (reasonableness of results), B231 (direct and indirect measurement), B331 (estimates of measurements)

Measurement

B131: derive formulas for perimeter, area, surface area, circumference, or volume (MC, GR) pp 87-89, includes B122 (grades 3-5, real world measurement problems), B231 (see A431)
B132: derive formulas for rate, distance, time, angle measures (MC, GR) pp 97-99, includes B122 (see B131), B231 (see A431)
B133: impact of change in one dimension on other measurements (MC, GR) pp 106-108, includes C231 (see chart)
B134: real-world problems involving scale drawings (MC, GR) pp 116-117, includes B231 (see A431)
B232: real-world problems involving conversions within the metric or customary system (MC, GR) pp 124-125

Geometry and Spatial Sense

C131: relationships and properties among regular and irregular shapes (MC, GR) pp 132-134, includes C121 (grades 3-5, draw or describe 2- and 3-dimensional shapes)
C231: symmetry, reflections, congruency, similarity, perpendicularity, parallelism, and transformations (MC) p 141, includes B133 (see chart), C121 (see C131), C131 (see chart), C331 (see chart)
C232: patterns involving tessellations (MC) p 150
C331: real-world and mathematical problems involving geometric properties and relationships (MC) pp 155-156, includes C231 (see chart)
C332: rectangular coordinate system and simple properties of lines (MC) pp 165-166

Algebraic Thinking

D131: patterns, relationships, and functions (MC, GR) pp 179-181, includes A531 (number sequences)
D132: cause-and-effect relationships (MC, GR) pp 187-189, includes A531 (see D131)
D231: algebraic expressions, equations, and inequalities (MC) p 198, includes A133 (see A134)
D232: linear equations and inequalities (MC, GR) pp 205-206

Data Analysis and Probability

E131: different ways of presenting data leading to different interpretations (MC, GR) pp 213-215, includes E133 (analyze and organize data in a quality display)
E132: measures of central tendency and range (MC, GR) pp 228-230, includes E133 (see E131)
E231: experimental results compared with mathematical expectations (MC) pp 237-238
E232: odds for and odds against a given situation (MC) p 244, includes E222 (grades 3-5, predicts likelihood of simple events occurring)
E331: inferences and conclusions based on statistics (MC) p 250, includes E332 (common uses and misuses of statistics)

All FCAT math items at Grade 7 are tested in multiple choice (MC) or gridded response (GR) format
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 8

A132: relative size of numbers (MC) pp 44-45
A134: equivalent forms of numbers (MC, GR) pp 51-52, includes A131 (verbal and word names for numbers), A133 (concrete and symbolic representations of numbers)
A231: exponential and scientific notation (MC, GR) pp 58-59
A331: effects of operations on numbers (MC) p 63
A332: order of operations (MC, GR) pp 69-70
A333: appropriate methods of computing (MC, GR) pp 76-77
A431: estimation strategies (SR) pp 81-82 , includes A421 (reasonableness of results), B231 (direct and indirect measurement), B331 (estimates of measurements)

Number Sense, Concepts, and Operations

B131: derive formulas for perimeter, area, surface area, circumference, or volume (GR, SR) pp 90-94, includes B122 (grades 3-5, real world measurement problems), B231 (see A431)
B132: derive formulas for rate, distance, time, angle measures (GR, SR) p 100-101, includes B122 (see B131), B231 (see A431)
B133: impact of change in one dimension on other measurements (MC, GR) pp 109-111, includes C231 (see chart)
B134: real-world problems involving scale drawings (MC, GR) pp 118-120, includes B231 (see A431)
B232: real-world problems involving conversions within the metric or customary system (MC, GR) pp 126-127

Measurement

C131: relationships and properties among regular and irregular shapes (MC, GR) pp 135-137, includes C121 (grades 3-5, draw or describe 2- and 3-dimensional shapes)
C231: symmetry, reflections, congruency, similarity, perpendicularity, parallelism, and transformations (MC, GR, ER) pp 142-147, includes B133 (see chart), C121 (see C131), C131 (see chart), C331 (see chart)
C232: patterns involving tessellations (MC) p 151
C331: real-world and mathematical problems involving geometric properties and relationships (MC, SR) pp 157-161, includes C231 (see chart)
C332: rectangular coordinate system and simple properties of lines (MC, SR) pp 167-174

Geometry and Spatial Sense

D131: patterns, relationships, and functions (MC, GR) pp 182-183, includes A531 (number sequences)
D132: cause-and-effect relationships (MC, GR, SR) pp 190-195, includes A531 (see D131)
D231: algebraic expressions, equations, and inequalities (MC, SR) p 199-201, includes A133 (see A134)
D232: linear equations and inequalities (MC, GR) pp 207-208

Algebraic Thinking

E131: different ways of presenting data leading to different interpretations (MC, GR, ER) pp 216-223, includes E133 (analyze and organize data in a quality display)
E132: measures of central tendency and range (MC, GR) pp 231-233, includes E133 (see E131)
E231: experimental results compared with mathematical expectations (SR) pp 239-241
E232: odds for and odds against a given situation (MC, GR) p 245-246, includes E222 (grades 3-5, predicts likelihood of simple events occurring)
E331: inferences and conclusions based on statistics (MC, SR) pp 251-253, includes E332 (common uses and misuses of statistics)

Data Analysis and Probability

MC - multiple choice, GR - gridded response, SR - short response, ER - extended response
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 9

Number Sense, Concepts, and Operations

A142: relative size of numbers (MC) p 40
A144: equivalent forms of numbers (MC, GR) pp 44-45, includes A141 (verbal and word names for numbers), A143 concrete and symbolic representations of numbers
A341: effects of operations on numbers (MC, GR) pp 49-50, includes A242 (real number system)
A342: properties of numbers as operational shortcuts (MC, GR) pp 54-55, includes A242 (see A341)
A343: appropriate methods of computing (MC, GR) pp 58-59, includes A242 (see A341)
A441: estimation strategies in complex situations (MC) pp 63-64, includes B341 (estimates of measurements)

Measurement

B141: derive formulas for perimeter, area, surface area, circumference, or volume (MC, GR) pp 69-71, includes B122 (grades 3-5, real-world problems involving other common units of measure)
B142: derive formulas for rate, distance, time, angle measures, or arc lengths (MC, GR) pp 77-78, includes B122 (see B141)
B143: real-world problems involving similarity and proportionality (MC, GR) pp 84-86
B241: direct and indirect measurement (MC, GR) pp 89-90
B242: real-world problems involving rated measures (mph, fps) (MC, GR) pp 94-95, includes B232 (grades 6-8, problems and conversions within the metric or customary systems)

Geometry and Spatial Sense

C141: formal and informal proofs (MC, GR) pp 100-101, includes C121 (grades 3-5, describes/draws 2- and 3-D shapes), C131 (grades 6-8, basic properties of 2- and 3-D shapes)
C241: perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations (MC, GR) pp 109-111, includes B143, C141, C341 (see chart)
C341: ratio, proportion, right triangle geometry (MC) pp 124-126, includes C241 (see chart)
C342: algebraic properties in a rectangular coordinate system (MC, GR) pp 133-135, includes C332 (grades 6-8, ordered pairs and simple properties of lines), D241 (sequences and series)

Algebraic Thinking

D141: relationships, patterns, and functions (MC, GR) pp 143-144
D142: impact when changing parameters of functions (MC, GR) pp 151-153
D242: systems of linear equations and inequalities (MC, GR) pp 158-160, includes D241 (see C342)

Data Analysis and Probability

E141: interpret data from charts, tables, and plots (MC, GR) pp 169-171, includes E131 (grades 6-8, different ways of presenting data, leading to different interpretations), E143 (use of statistics to make predictions)
E142: measures of central tendency and dispersion (MC, GR) pp 182-184, includes E143 (see E141)
E241: probability, including permutations and combinations (MC, GR) pp 188-190, includes E242 (probability for simple and compound events)
E341: interpret data that results from statistical experiments (MC, GR) pp 195-197, includes E331 (grades 6-8, inferences and conclusions based on statistics), E342 (limitations of statistical techniques and data in making inferences)

All FCAT math items at Grade 9 are tested in multiple choice (MC) or gridded response (GR) format
pp - Test Item and Performance Task Specifications pages

SUMMARY OF BENCHMARKS ASSESSED ON FCAT - GRADE 10

Number Sense, Concepts, and Operations

A142: relative size of numbers (MC) pp 41-42
A144: equivalent forms of numbers (MC, GR) pp 46-47, includes A141 (verbal and word names for numbers), A143 concrete and symbolic representations of numbers
A341: effects of operations on numbers (MC, GR) pp 51-52, includes A242 (real number system)
A342: properties of numbers as operational shortcuts (MC) p 56, includes A242 (see A341)
A343: appropriate methods of computing (MC, GR) pp 60-61, includes A242 (see A341)
A441: estimation strategies in complex situations (SR) pp 65-67, includes B341 (estimates of measurements)

Measurement

B141: derive formulas for perimeter, area, surface area, circumference, or volume (GR, SR) pp 72-75, includes B122 (grades 3-5, real-world problems involving other common units of measure)
B142: derive formulas for rate, distance, time, angle measures, or arc lengths (MC, SR) pp 79-82, includes B122 (see B141)
B241: direct and indirect measurement (MC) pp 91-92
B242: real-world problems involving rated measures (mph, fps) (MC, GR) pp 96-98, includes B232 (grades 6-8, problems and conversions within the metric or customary systems)

Geometry and Spatial Sense

C141: formal and informal proofs (MC, GR, SR) pp 102-107, includes C121 (grades 3-5: describes/draws 2- and 3-D shapes), C131 (grades 6-8, basic properties of 2- and 3-D shapes)
C241: perpendicularity, parallelism, tangency, congruency, similarity, reflections, symmetry, and transformations (MC, GR, ER) pp 112-118, includes B143 (similarity and proportionality), C141, C341 (see chart)
C242: planar cross sections (MC) pp 121-122
C341: ratio, proportion, right triangle geometry (MC, SR) pp 127-131, includes C241 (see chart)
C342: algebraic properties in a rectangular coordinate system (MC, GR, SR) pp 136-141, includes C332 (grades 6-8, ordered pairs and simple properties of lines), D241 (sequences and series)

Algebraic Thinking

D141: relationships, patterns, and functions (MC, GR) pp 145-149
D142: impact when changing parameters of functions (SR) pp 154-156
D242: systems of linear equations and inequalities (MC, GR, SR) pp 161-167, includes D241 (see C342)

Data Analysis and Probability

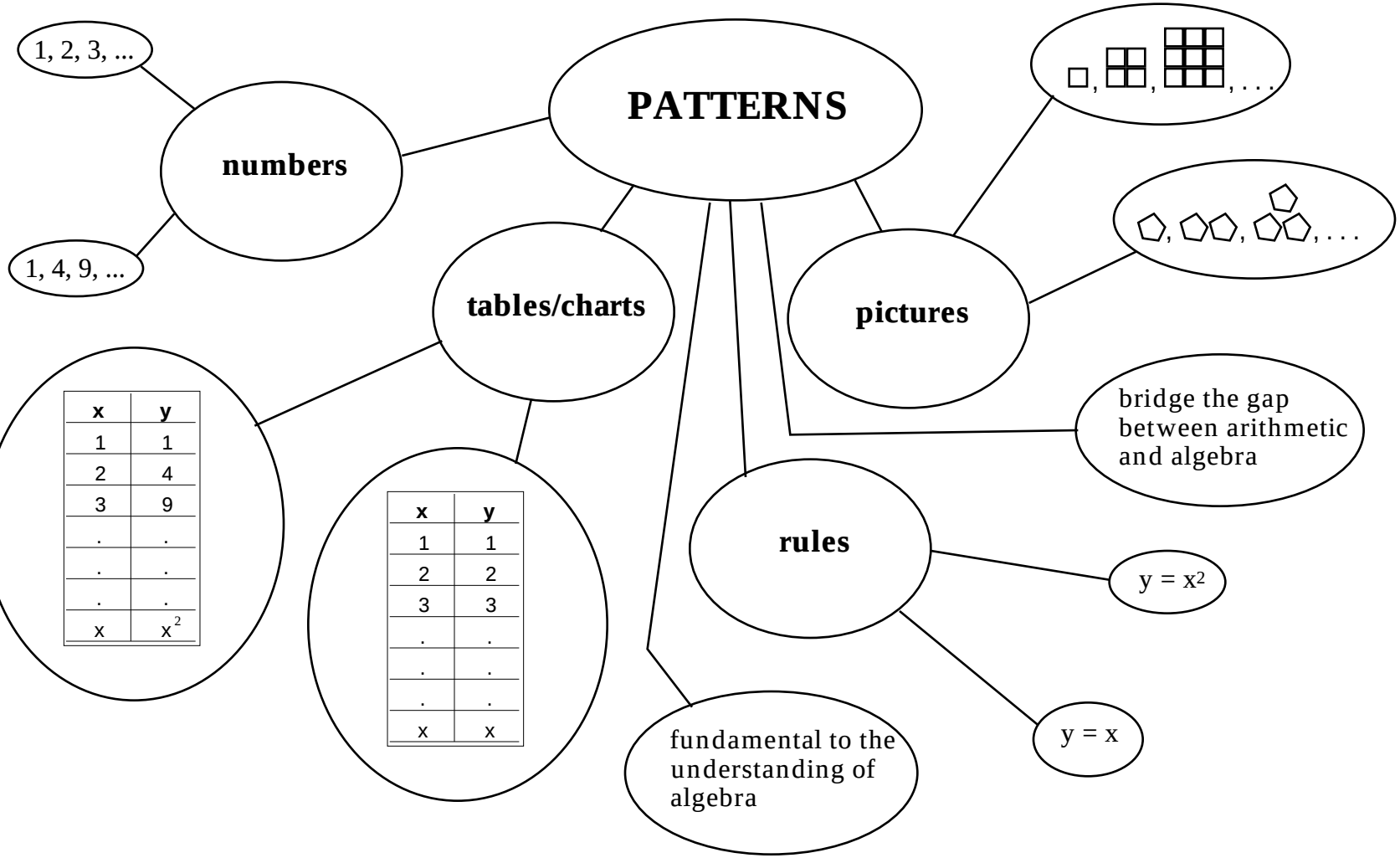
E141: interpret data from charts, tables, and plots (MC, GR, SR) pp 172-180, includes E131 (grades 6-8, different ways of presenting data, leading to different interpretations), E143 (use of statistics to make predictions)
E142: measures of central tendency and dispersion (MC, GR) pp 185-186, includes E143 (see E141)
E241: probability, including permutations and combinations (MC, GR) pp 191-193, includes E242 (probability for simple and compound events)
E341: interpret data that results from statistical experiments (MC, GR, SR) pp 198-202, includes E331 (grades 6-8, inferences and conclusions based on statistics), E342 (limitations of statistical techniques and data in making inferences)

MC - multiple choice, GR - gridded response, SR - short response, ER - extended response
pp - Test Item and Performance Task Specifications pages

ALGEBRAIC THINKING STRAND

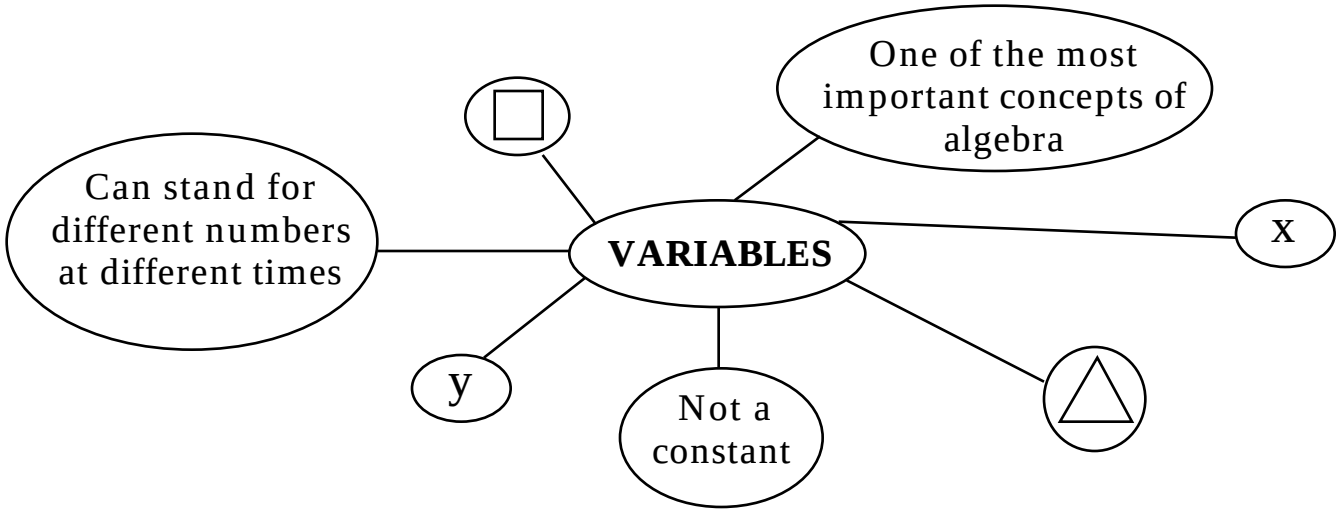
PATTERNS

<u>Patterns</u> allow us to generalize relationships within a set of data.

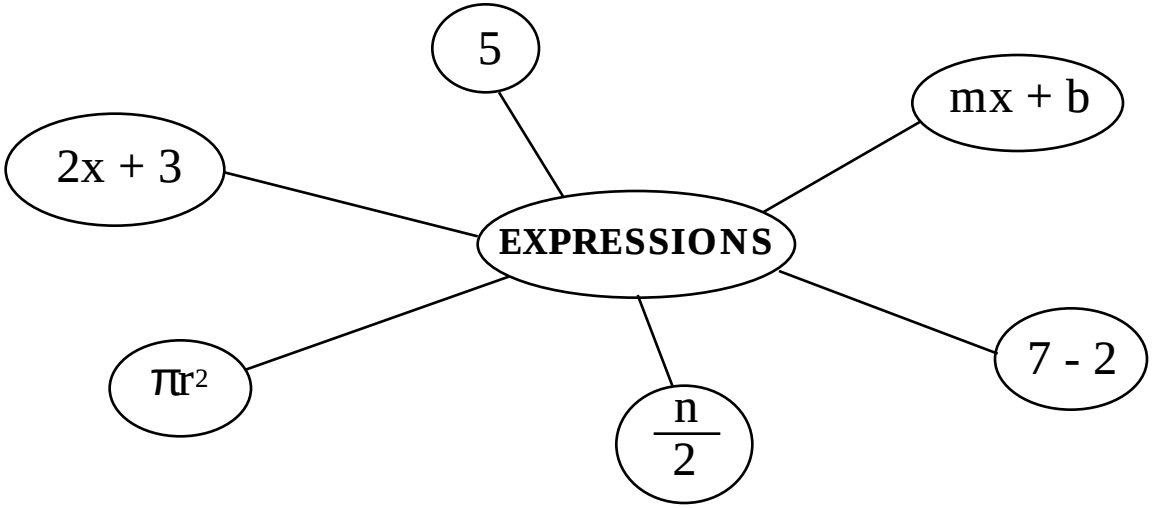


VARIABLES and EXPRESSIONS

A variable is a symbol used to represent a value.

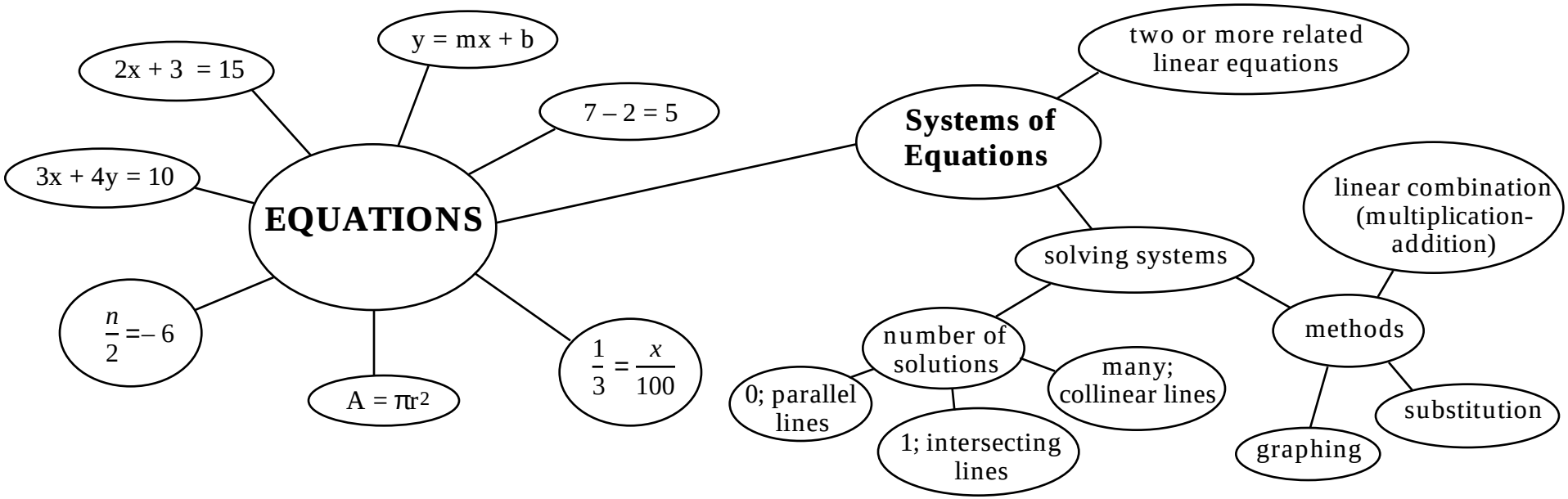


An expression is a mathematical phrase that uses numbers, variables, and/or operations.

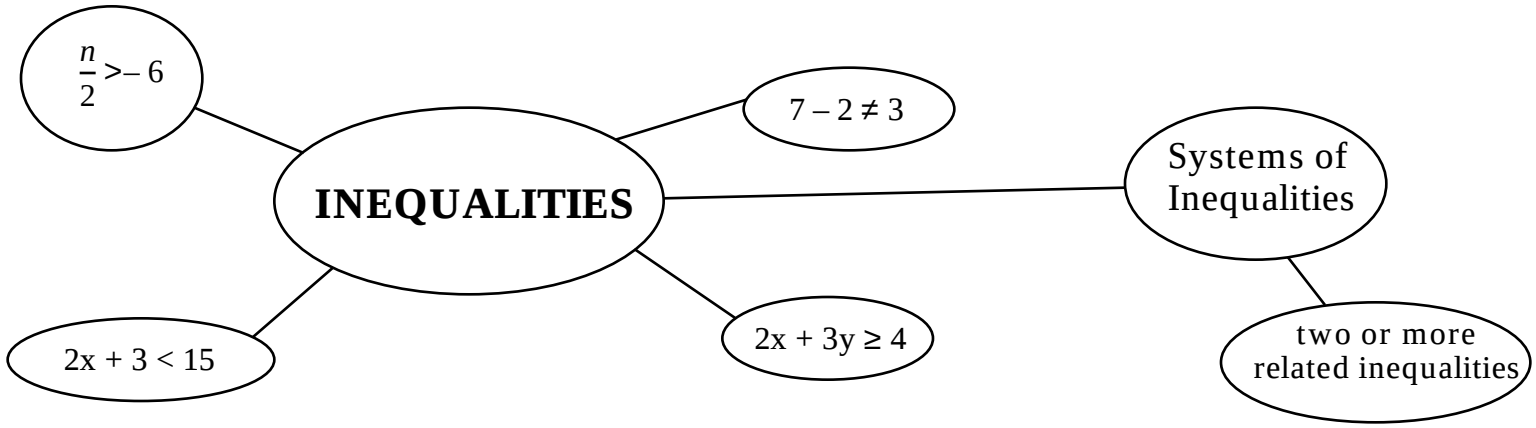


EQUATIONS and INEQUALITIES

An <u>equation</u> is a sentence that has two equal mathematical expressions.

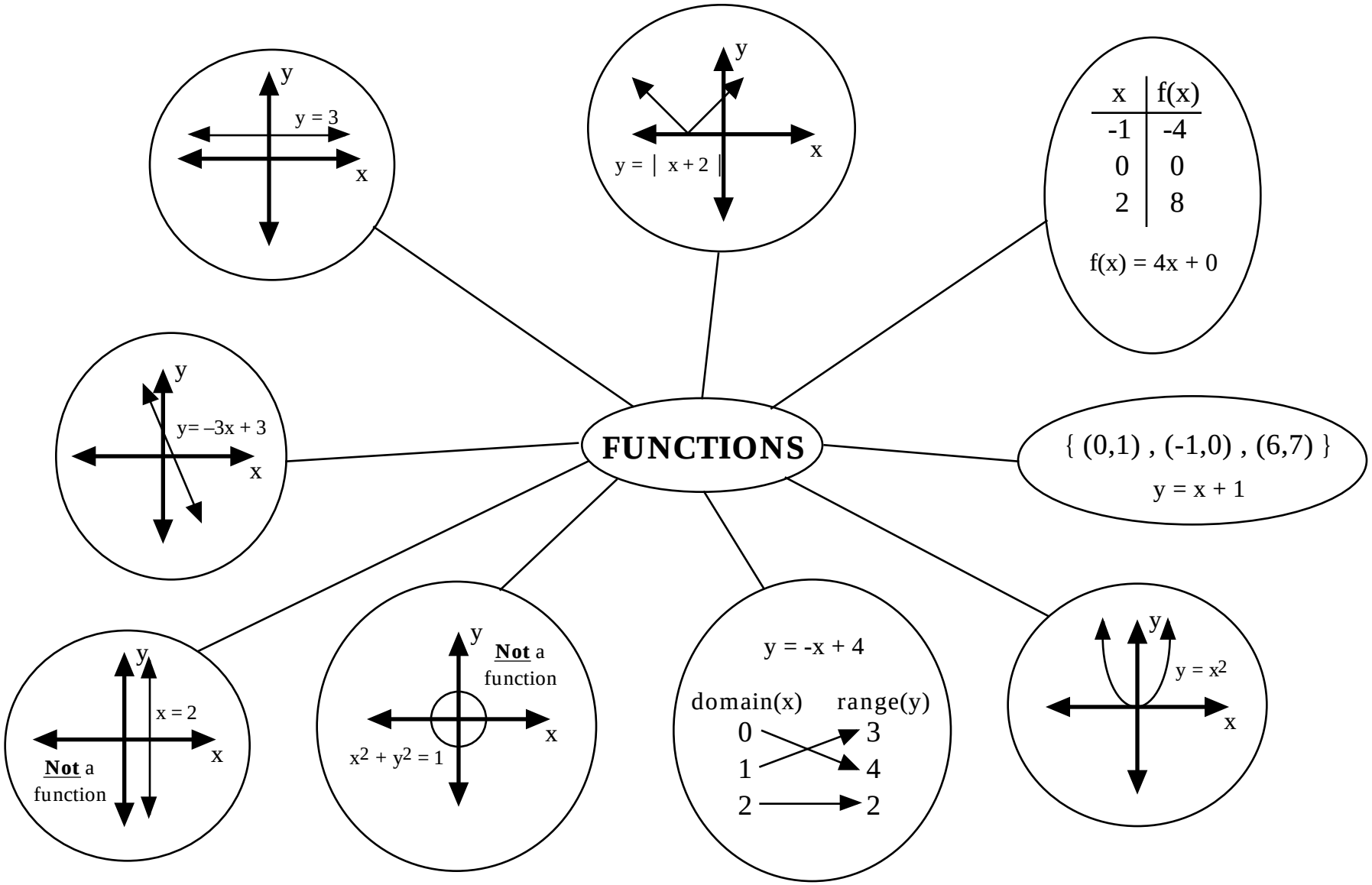


An <u>inequality</u> is any mathematical sentence that is not an equation.



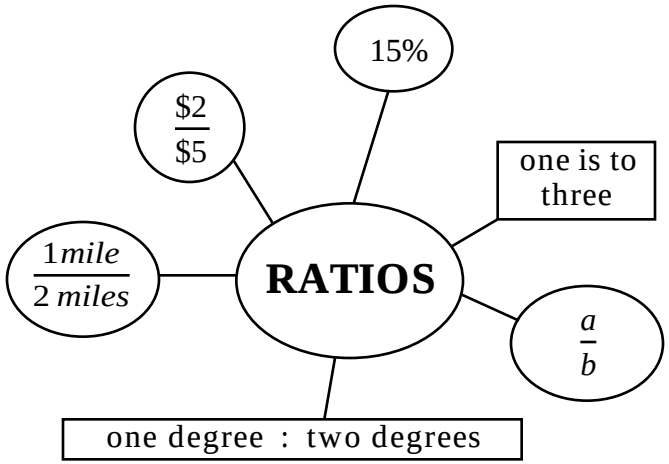
FUNCTIONS

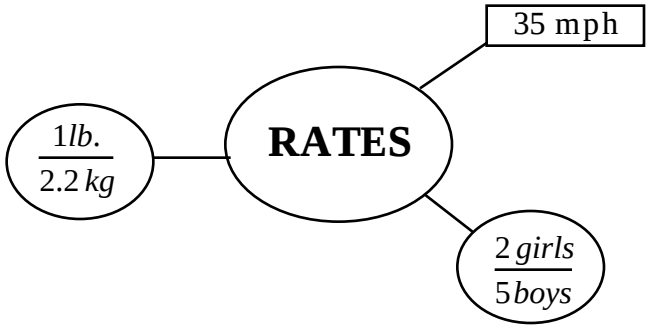
A <u>function</u> is a relationship in which the value of one variable depends on the value of another variable; each first value may be paired with one and only one second value.



RATIOS, RATES, and PROPORTIONS

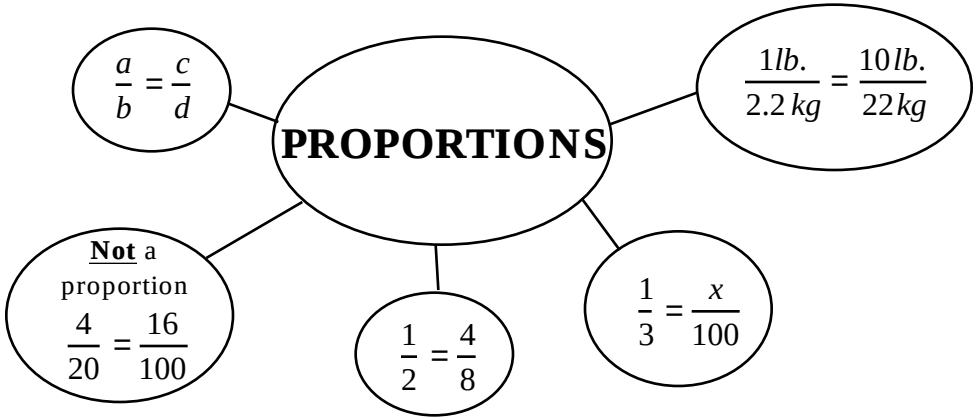
A <u>ratio</u> is a comparison of two of the same measurements.





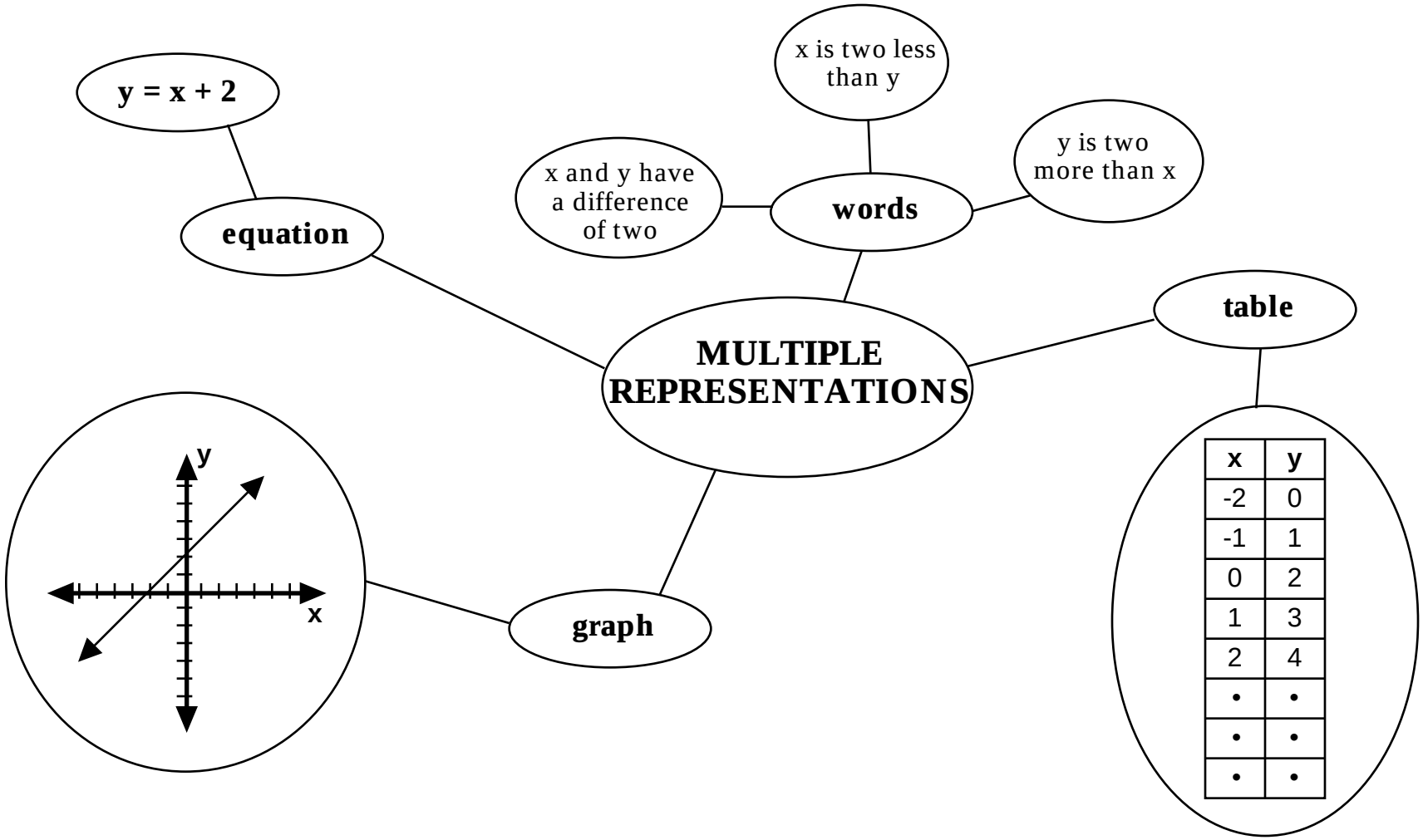
A <u>rate</u> is a comparison of two different measurements.

A <u>proportion</u> is a comparison of two equivalent ratios.



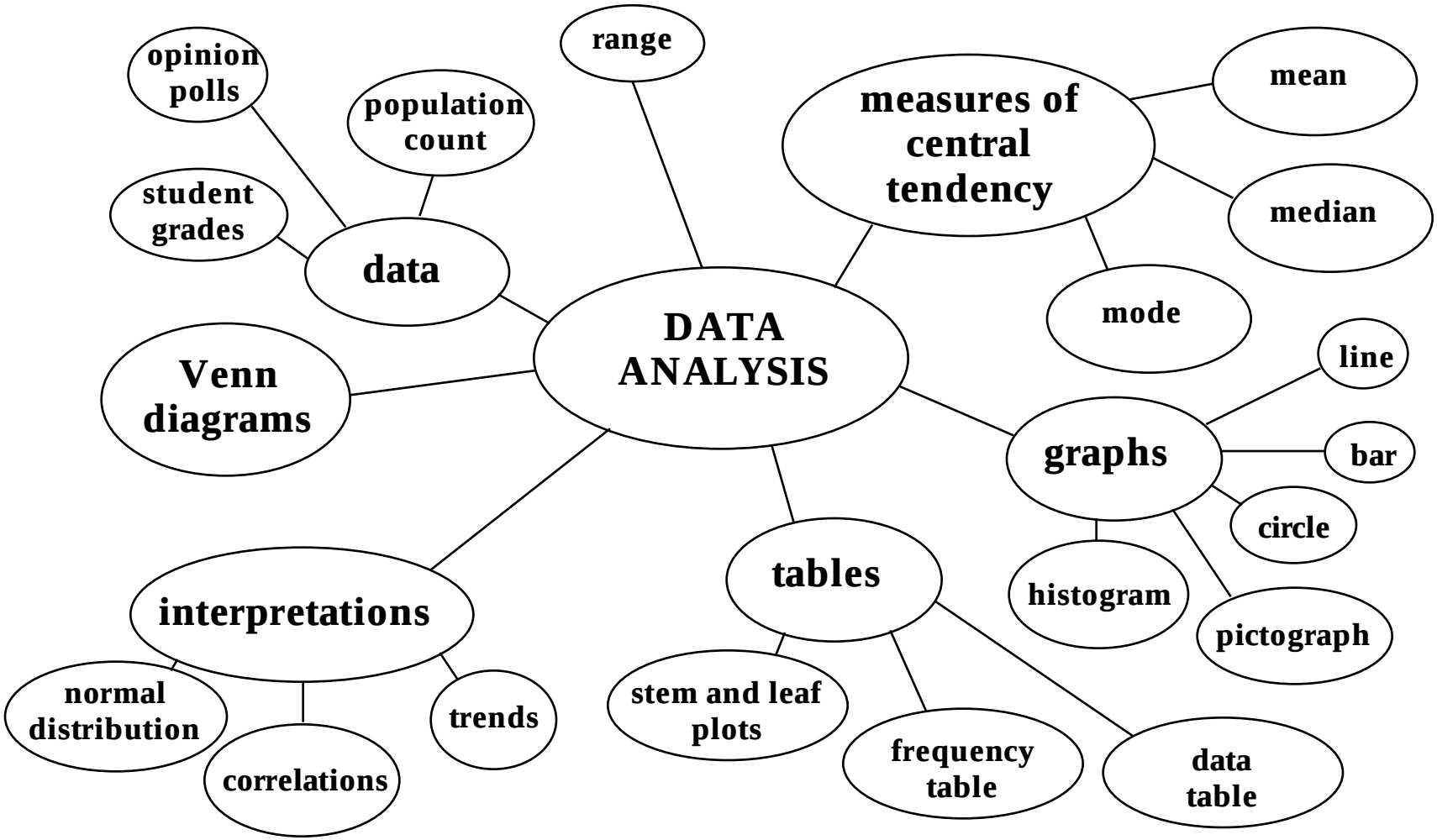
MULTIPLE REPRESENTATIONS

A single mathematical concept can be represented in a variety of forms such as symbols, words, graphs, tables, and equations . . .



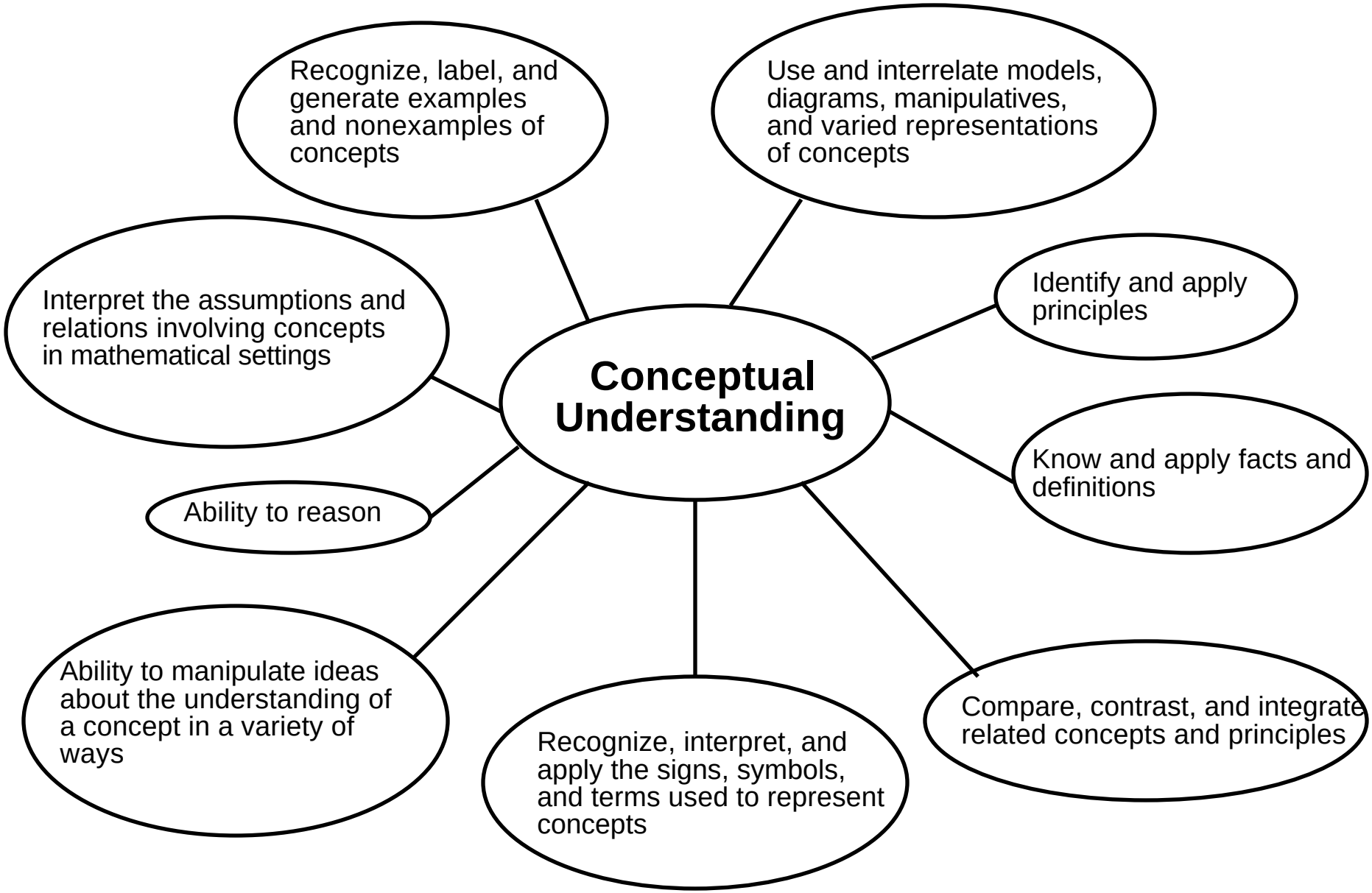
DATA ANALYSIS

The collection and organization of information into a form that is easily understood.

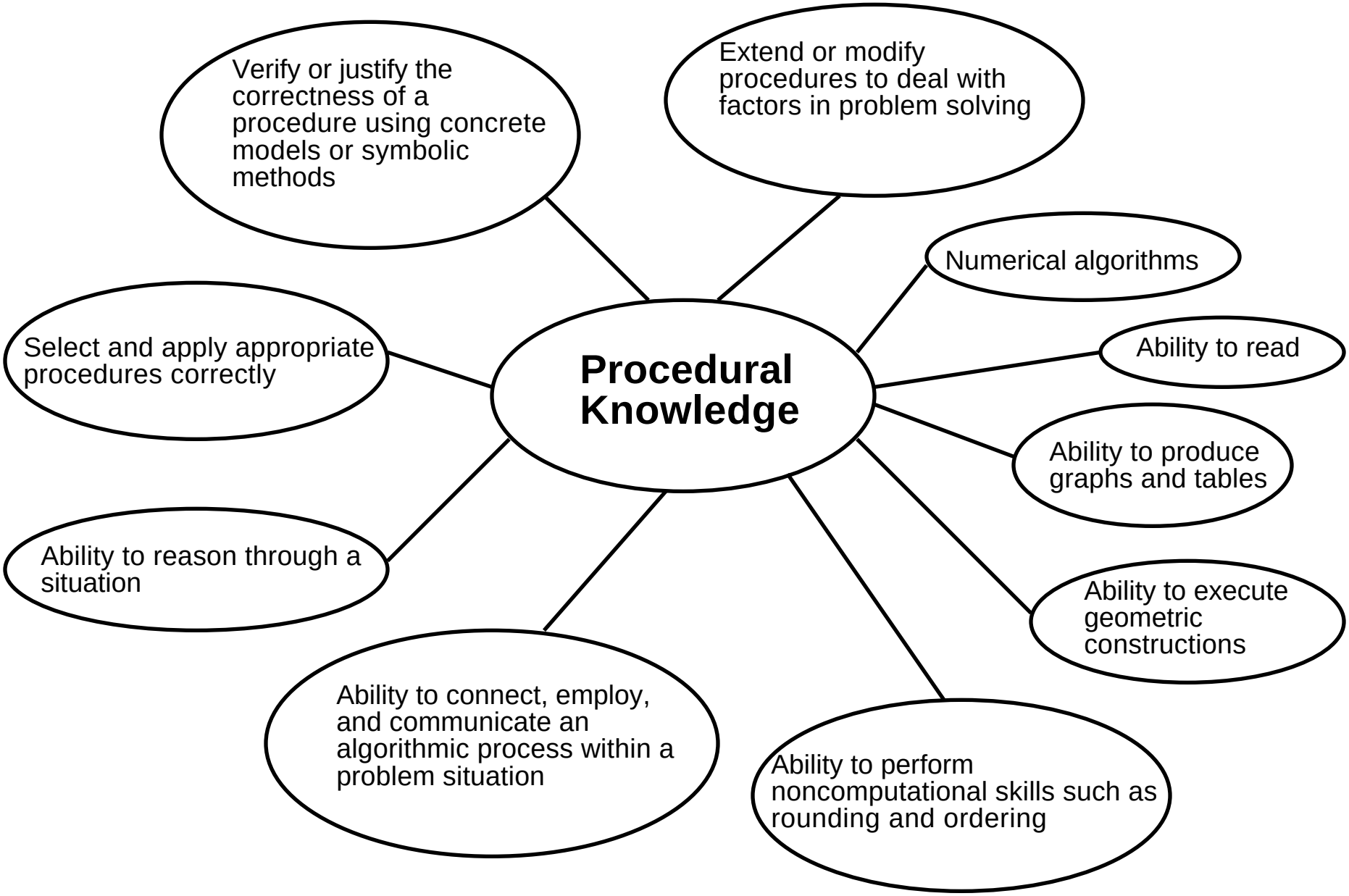


MATHEMATICAL ABILITIES

Mathematical Abilities



Mathematical Abilities



BLOOM'S TAXONOMY of the COGNITIVE DOMAIN

Mathematics

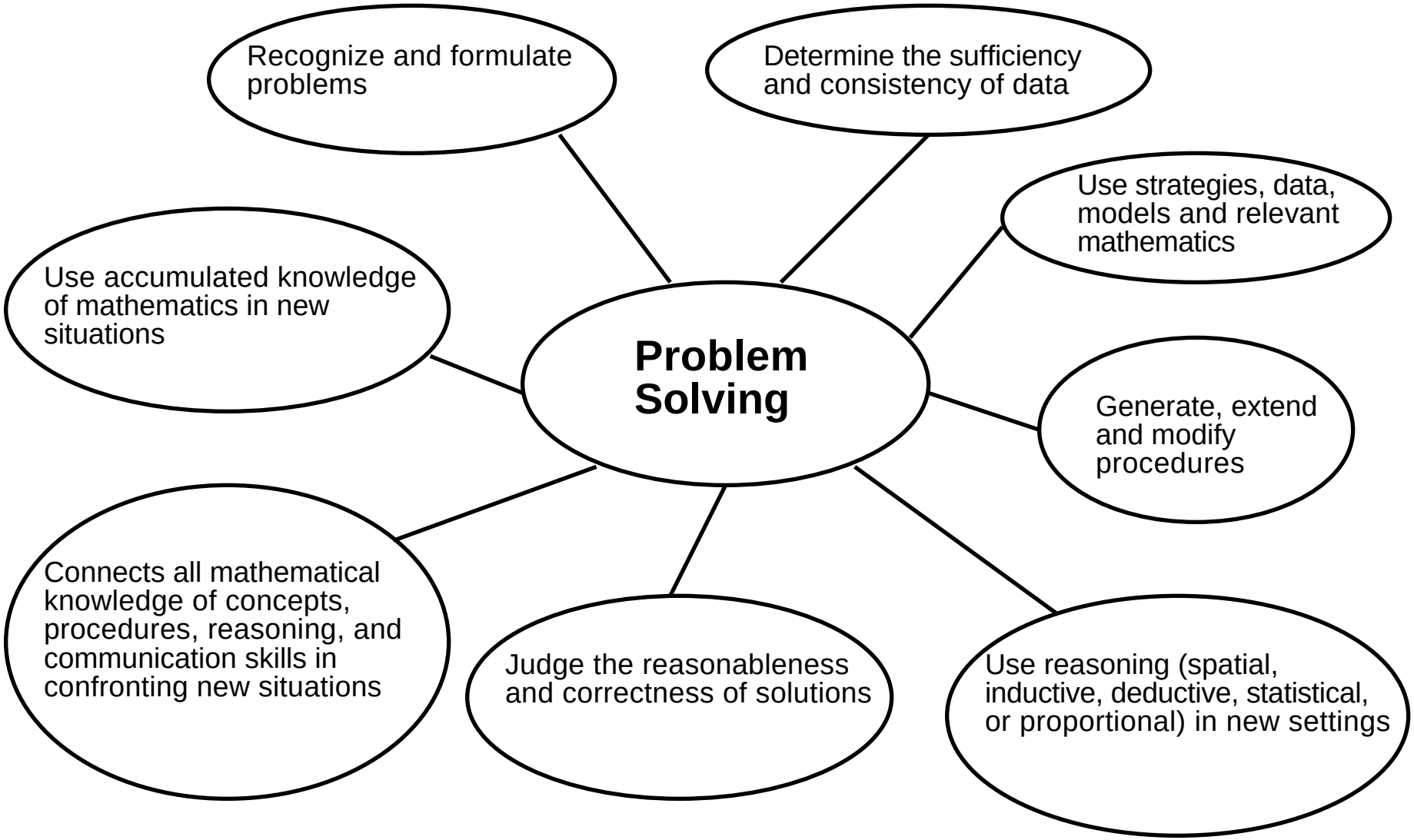
LEVEL I = 50% EL 40% MS 35% HS **LEVEL II = 50% EL 60% MS 65% HS**

Knowledge **Ability to recall previously learned facts, concepts, or principles.**	**Comprehension** **Ability to translate previously learned information, or to grasp meaning, intent, or relationships.**	**Application** **Ability to apply previously acquired knowledge or information to a new situation.**	**Analysis** **Ability to break material down into its components so that organizational structure may be understood.**	**Synthesis** **Ability to analyze the parts and put them together for form a whole.**	**Evaluation** **Ability to make judgments based on evidence and determine the value of material based on definite criteria.**
know	restate	exhibit	interpret	compose	rate
record	recognize	apply	contrast	invent	conclude
relate	locate	dramatize	investigate	arrange	defend
cite	translate	calculate	inspect	set up	score
define	summarize	solve	combine	incorporate	determine
list	explain	employ	inventory	plan	decide
collect	report	practice	analyze	develop	compare
enumerate	interpret	interview	scrutinize	assemble	select
memorize	discuss	use	deduce	prepare	estimate
recall	express	illustrate	classify	originate	predict
label	retell	experiment	examine	propose	appraise
tell	describe	stimulate	question	design	value
repeat	identify	demonstrate	differentiate	construct	criticize
name	review	operate	categorize	imagine	infer
specify	show	schedule	inquire	predict	judge
recount	paraphrase	dramatize	arrange	produce	choose
ask	tell	summarize	survey	formulate	evaluate
count	discover	order	diagram	create	revise
indicate	infer	generalize	compare	hypothesize	assess
inquire	measure	draw	probe	contrive	deduce
know	calculate	reconstruct	detect	organize	recommend
locate	outline	compute	group	assume	interpret
recite	convert	manipulate	dissect	collect	validate
observe	discuss	relate	distinguish	derive	justify
choose	paraphrase	propose	divide	combine	prioritize
match	change	translate	simplify	compile	rank

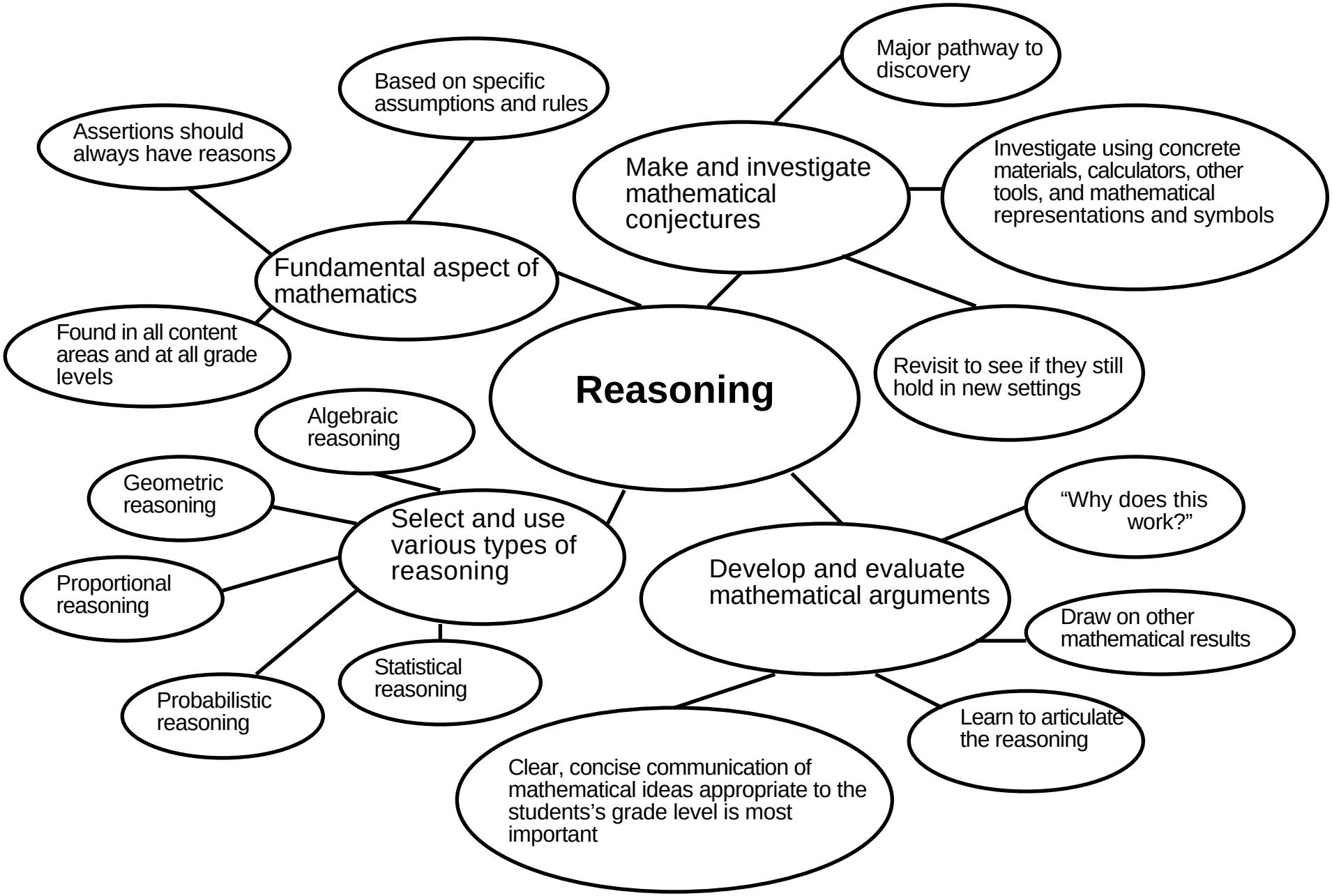
FCAT uses only two classifications of cognitive skills. Level I includes the knowledge, comprehension, and application (in familiar situations) categories, and Level II includes the application (in unique situations), analysis, synthesis, and evaluation categories.

PROCESS STANDARDS

Process Standards

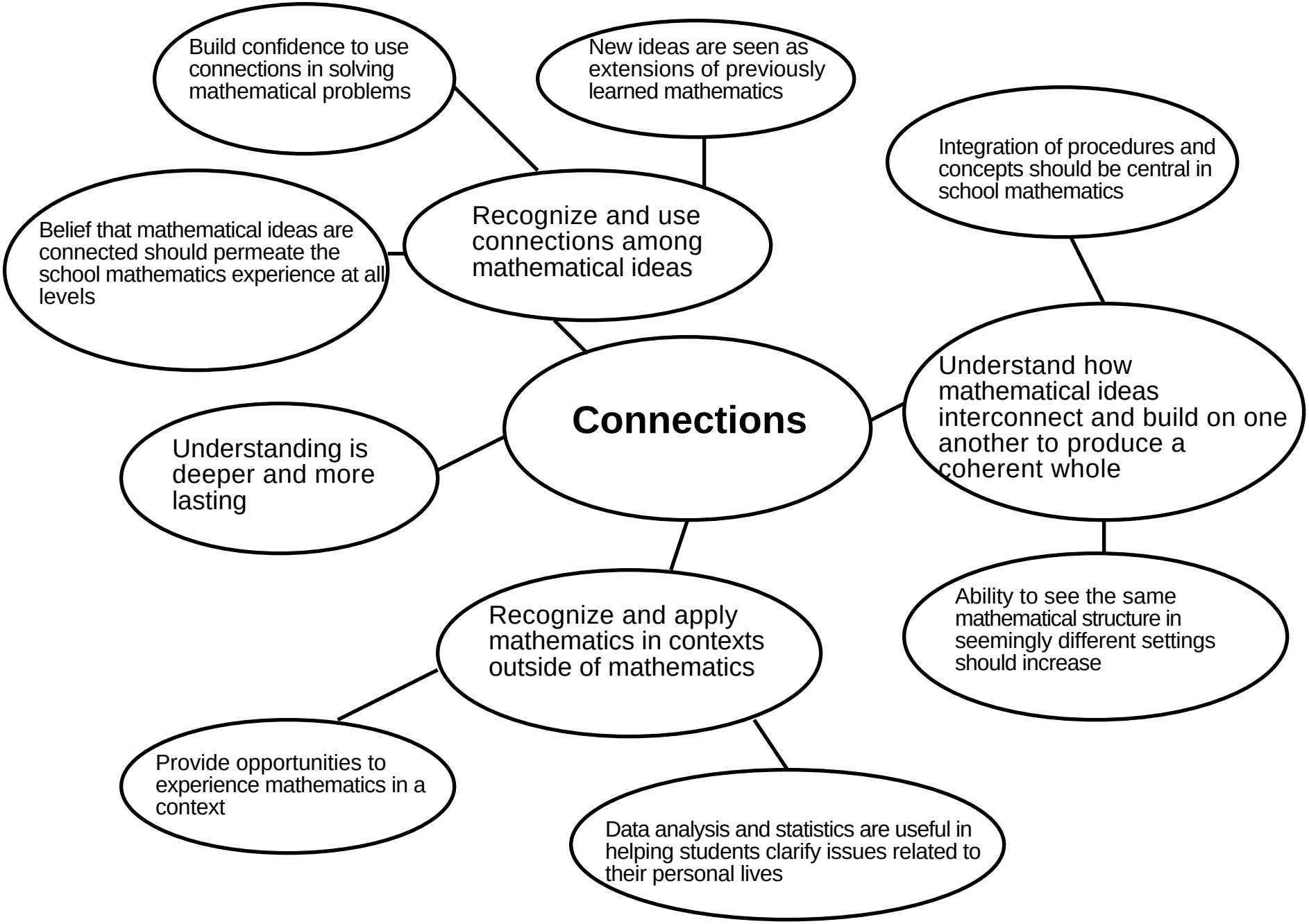
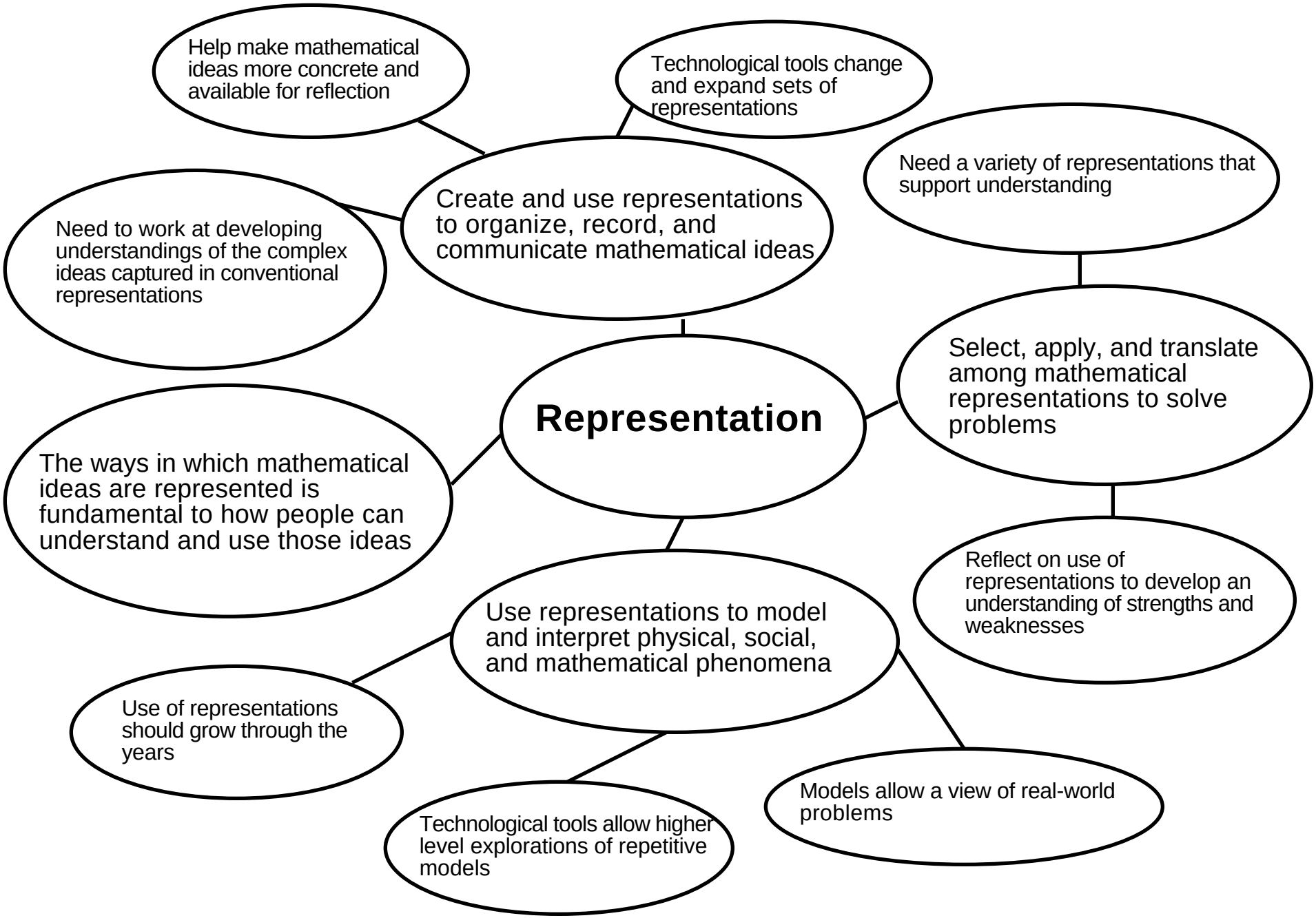


Process Standards



Process Standards

Process Standards



Process Standards