BLACKHAWK SCHOOL DISTRICT

# Course Title: Math 7/8 Developmental

**Grade Level(s):** 7/8

**Length of Course:** One Year

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**Daily analog clock problem and/or money problem**

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| **Unit Breakdown** | **Objectives** | **Common Core Standards** | **PSSA Standards** |
| Number Theory | * Calculate problems using integer rules using numbers lines and number charts-maximum 3 weeks no calculators
* Apply the order of operations using integers and rational numbers-calculators permitted
* Use integer rules to solve real life problems –calculators permitted
* Use rational number rules to solve real life problems- calculators permitted
* Compare and order integers
* Compare and order rational numbers.
* Convert rational numbers into different forms using a calculator
 | * CC.2.1.7.E.1
 | * M07.A-N.1.1.1
* M07.A-N.1.1.2
* M07.A-N.1.1.3
 |
| Expressions, Equations, and Inequalities | * Apply properties to evaluate and simplify expressions-(combine like terms and substitute values for variables)
* Use the distributive property to write equivalent expressions.
* Identify GCF and LCM
* Factor GCF from algebraic expressions
* Solve multi-step linear equations with integer coefficients
* Solve multi-step inequalities with integer coefficients and graph them
* Solve real world and word problems using linear equations and inequalities
 | * CC.2.2.7.B.1
* CC.2.2.7.B.3
 | * M07.B-E.1.1.1
* M07.B-E.2.2.1
* M07.B-E.2.2.2
 |
| Ratio, proportion, and percent | * Review simplifying fractions
* Express ratios in different forms-be sure to simplify
* Describe rates as unit rates
* Real life applications of unit rates i.e. Which is the better buy?
* Using proportions to solve algebraic and real world problems
* Apply percent equations and proportions to real world problems such as discount, interest, tax, tip, etc.
 | * CC.2.1.7.D.1
* CC.2.2.7.B.3
 | * M07.A-R.1.1.1
* M07.A-R.1.1.6
* M07.B-E.2.1.1
 |
| Geometry | * Locate points and quadrants on the coordinate plane
* Use a chart to find solutions to linear equations and graph the line
* Use area and perimeter formulas for triangles and quadrilaterals to solve real world problems
* Use area and circumference formulas to solve real world problems
 | * CC.2.3.7.A.1
* CC.2.2.7.B.3
* CC.2.2.8.B.2
 | * M07.C-G2.2.1
* M07.C-G.2.2.2
 |
| Statistics | * Calculate probabilities of simple events.
* Compare measures of central tendency
 | * CC.2.4.7.B.3
 | * M07.D-S.3.2.2.
* M07.D-S.3.1.1.
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Year 2 Curriculum

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| --- | --- | --- | --- |
| Number Theory | * Calculate problems using integer rules using numbers lines and number charts-maximum 3 weeks no calculators
* Apply the order of operations using integers and rational numbers-calculators permitted
* Use rational number rules to solve real life problems –calculators permitted
* Compare and order rational numbers.
* Convert rational numbers into different forms using a calculator
* Evaluate exponents and find square roots of perfect squares
* Write numbers in scientific notation and standard form
 | * CC.2.1.7.E.1
* CC.2.2.8.B.1
 | * M07.A-N.1.1.1
* M07.A-N.1.1.2
* M07.A-N.1.1.3
* M08.B-E.1.1.2
* M08.B-E.1.1.3
 |
| Expressions, Equations, and Inequalities | * Apply properties to evaluate and simplify expressions-(combine like terms and substitute values for variables)
* Use the distributive property to write equivalent expressions.
* Identify GCF and LCM
* Factor GCF from algebraic expressions
* Solve multi-step linear equations with integer coefficients
* Solve multi-step inequalities with integer coefficients and graph them
* Solve real world and word problems using linear equations and inequalities
* Use multiplication and division rule for exponents to simplify expressions
 | * CC.2.2.7.B.1
* CC.2.2.8.B.1
* CC.2.2.7.B.3
 | * M07.B-E.1.1.1
* M07.B-E.2.2.1
* M07.B-E.2.2.2
* M08.B-E.1.1.1
 |
| Ratio, proportion, and percent | * Review simplifying fractions
* Express ratios in different forms-be sure to simplify
* Describe rates as unit rates
* Real life applications of unit rates i.e. Which is the better buy?
* Using proportions to solve algebraic and real world problems
* Apply percent equations and proportions to real world problems such as discount, interest, tax, tip, etc.
 | * CC.2.1.7.D.1
* CC.2.2.7.B.3
 | * M07.A-R.1.1.1
* M07.A-R.1.1.6
* M07.B-E.2.1.1
 |
| Geometry | * Locate points and quadrants on the coordinate plane
* Use a chart to find solutions to linear equations and graph the line
* Calculate the slope
* Graph scatterplots and identify the relationship
* Use area and perimeter formulas for triangles and quadrilaterals to solve real world problems
* Determine the area of irregular polygons
* Determine the area compound figures
 | * CC.2.3.7.A.1
* CC.2.2.7.B.3
* CC.2.2.8.B.2
 | * M07.C-G2.2.1
* M07.C-G.2.2.2
* M08.B-E.2.1.1
* M08.B-E.2.1.2
 |
| Statistics | * Calculate probabilities of simple events.
* Compare measures of central tendency
* Display data in various forms-line plots, stem-and-leaf, histogram, box-and-whisker, bar graph, circle graph,
 | * CC.2.4.7.B.3
 | * M07.D-S.3.2.2.
* M07.D-S.3.1.1.
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Use Math 7 textbook and number worlds level H, level I and level J (year 2)