

***FlyBy Math™* Alignment**
2005 Connecticut Mathematics Curriculum Framework

1. ALGEBRAIC REASONING: PATTERNS AND FUNCTIONS: Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

How do patterns and functions help us describe data and physical phenomena and solve a variety of problems?

1.2 Represent and analyze quantitative relationships in a variety of ways.

Performance Standards and Expectations

a. Describe the effects of characteristics of mathematical relationships on the way the relationships are represented verbally and in tables, graphs and equations.

(1) Determine the constant rate of change in a linear relationship and recognize this as the slope of a line.

(2) Compare and contrast the graphs of lines with the same slope versus those with different slopes.

(3) Interpret slope and y-intercepts from contextual situations, graphs and linear equations.

(4) Given two linear relationships in context, recognize that they may have a common solution.

***FlyBy Math™* Activities**

--Interpret the slope of a line in the context of a distance-rate-time problem.

--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

1.3 Use operations, properties and algebraic symbols to determine equivalence and solve problems.

Performance Standards and Expectations

a. Solve problems using various algebraic methods and properties.

(2) Use tables, graphs and equations to represent mathematical relationships and solve real-world problems.

***FlyBy Math™* Activities**

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

GEOMETRY AND MEASUREMENT: Shapes and structures can be analyzed, visualized, measured and transformed using a variety of strategies, tools and technologies.

How do geometric relationships and measurements help us to solve problems and make sense of our world?

3.3 Develop and apply units, systems, formulas and appropriate tools to estimate and measure.

Performance Standards & Expected Performances

a. Solve problems involving measurement through the use of appropriate tools, techniques and strategies.

***FlyBy Math™* Activities**

--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.