

**LineUp With Math™ Alignment
Indiana’s Academic Standards - Mathematics**

Standard 2. Computation

Students solve problems involving integers, fractions, decimals, ratios, and percentages.*

Indicator	<i>LineUp With Math™ Activities</i>
7.2.2 Calculate the percentage increase and decrease of a quantity.	--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.
7.2.3 Solve problems that involve discounts, markups, and commissions.	--Use percent relationships to resolve distance, rate, time conflicts in air traffic control.

Standard 5. Measurement

Students compare units of measure and use similarity to solve problems. They compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less regular objects.*

Indicator	<i>LineUp With Math™ Activities</i>
7.5.3 Read and create drawings made to scale, construct scale models, and solve problems related to scale.	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

Standard 7. Problem Solving

Students make decisions about how to approach problems and communicate their ideas.

Indicator	<i>LineUp With Math™ Activities</i>
7.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
7.7.2 Make and justify mathematical conjectures based on a general description of a mathematical question or problem.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
7.7.3 Decide when and how to divide a problem into simpler parts.	--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.

Students use strategies, skills, and concepts in finding and communicating solutions to problems.

Indicator	<i>LineUp With Math™ Activities</i>
7.7.4 Apply strategies and results from simpler problems to solve more complex problems.	--Choose and apply a variety of strategies to optimize

	the solution of air traffic control conflicts.
7.7.6 Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
7.7.10 Make precise calculations and check the validity of the results in the context of the problem.	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
<i>Students determine when a solution is complete and reasonable and move beyond a particular problem by generalizing to other situations.</i>	
Indicator	<i>LineUp With Math™ Activities</i>
7.7.11 Decide whether a solution is reasonable in the context of the original situation.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
7.7.12 Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.	--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.