

# Integrated Math B Essentials

## Course Preparedness Profile & Expectations

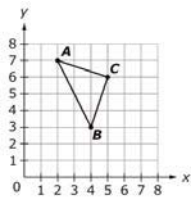
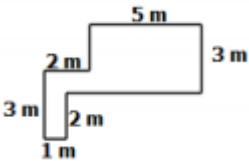
This course is designed for students who have had exposure to, but have yet to develop an understanding of all 7<sup>th</sup> grade standards. Below are some guidelines for choosing the best course for an individual student. This is *not* a placement test and it should *not* be used as the only criteria for making placement decisions.

### Student Background

Students entering **Integrated Math B Essentials** should *already* have a good understanding of the following concepts:

- Connecting ratio and rate to whole number multiplication and division
- Analyzing proportional relationships
- Using concepts of ratio and rate to solve problems
- Operations with positive and negative rational numbers
- Writing and interpreting and using expressions, equations, and inequalities
- Reason about and solve one variable equations and inequalities.
- Statistical thinking representing and analyzing quantitative relationships between dependent and independent
- Developing an understanding of statistical variability.
- Describe and analyze data distributions
- Finding common factors and multiples
- Solve real-world problems involving area, surface area, and volume.
- Understand area of polygons and triangles and surface area of prisms and pyramids by decomposing them into pieces whose area they can determine.
- Drawing, constructing and describing geometrical figures.
- Drawing polygons in the coordinate plane.
- Evaluating probability models.

Students entering **Integrated Math B Essentials** should also be able to solve problems such as

<p><u>Operations with Decimals Problem</u></p> <p>Write each expression in the correct column</p>	<table border="1"> <thead> <tr> <th>Equal to 5.42</th> <th>Not Equal to 5.42</th> </tr> </thead> <tbody> <tr> <td><math>2.36 + 3.06</math></td> <td><math>2.16 + 3.36</math></td> </tr> <tr> <td><math>1.80 \times 3</math></td> <td><math>9.53 - 4.11</math></td> </tr> <tr> <td></td> <td><math>2.71 \times 2</math></td> </tr> <tr> <td></td> <td><math>8.01 - 2.69</math></td> </tr> </tbody> </table>	Equal to 5.42	Not Equal to 5.42	$2.36 + 3.06$	$2.16 + 3.36$	$1.80 \times 3$	$9.53 - 4.11$		$2.71 \times 2$		$8.01 - 2.69$	<p><u>Coordinate Geometry Problem</u></p>  <p>What are the coordinates of points A, B, and C?</p>						
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<p><u>Ratios and Fractions Problem</u></p> <p>A certain car can travel 25 miles on <math>2\frac{1}{4}</math> gallons of gasoline. At this rate, what is the total number of miles the car can travel on <math>12\frac{1}{2}</math> gallons of gasoline?</p>	<p><u>Inequalities Problem</u></p> <p>Choose numbers from the list below to create three true mathematical statements</p> <div style="text-align: right;"> <table border="0"> <tr> <td><input type="checkbox"/></td> <td>&gt;</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>&lt;</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>=</td> <td><input type="checkbox"/></td> </tr> </table> </div> <table border="1" style="margin-left: auto;"> <tbody> <tr> <td><math> -2 </math></td> <td>6</td> <td>7</td> <td>-3</td> </tr> <tr> <td>-5</td> <td>-6</td> <td>-7</td> <td><math> -7 </math></td> </tr> </tbody> </table>	<input type="checkbox"/>	>	<input type="checkbox"/>	<input type="checkbox"/>	<	<input type="checkbox"/>	<input type="checkbox"/>	=	<input type="checkbox"/>	$ -2 $	6	7	-3	-5	-6	-7	$ -7 $
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<p><u>Area Problem</u></p>  <p>What is the area of the figure?</p>	<p><u>Problem Solving</u></p> <p>Carlos has 2.4 meters of wire. He needs 1.7 meters for one project and 0.8 for another project. Does Carlos have enough wire? If so, how much will he have left over? If not, how much more does he need?</p>																	

## Course Content and Expectations

In **Integrated Math B Essentials**, students will learn concepts such as:

- Working with radicals and integer exponents
- Approximate irrational by rational numbers.
- Analyze proportional relationships and use them to solve real world mathematical problems.
- Use their understanding of ratios and proportionality to solve scale drawings and a wide variety of percent problems.
- Understanding the connection between proportional relationships, lines, and linear equations
- Solving linear equations and systems of linear equations
- Using functions to model relationships between quantities
- Understanding congruence and similarity
- Applying the Pythagorean Theorem
- Investigate patterns of association in bivariate data.
- Use random sampling to draw inferences about a population and draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

As in all math courses offered at SDUHSD, students are aware of and make use of all **Standards for Mathematical Practices**:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

This course is a below grade level course which will have an individualized remediation component. Throughout the course, students will be expected to work collaboratively while problem solving and working on open ended problems.