

WCC Math Guided Self Placement

Math is an important foundation for many courses at Whatcom Community College. Getting started in math early in your education, and in a course that is right for you, is a critical step for academic success!

Our direct methods of math placement are:

- Recent (within two years) high school transcripts
- Advanced Placement (AP) test scores
- International Baccalaureate (IB)
- College Level Exam Program (CLEP)
- Smarter Balanced test scores
- Transcripts from colleges/universities (including WCC)

Once you have documentation for placement, work with your advisor to determine your first math class.

If none of the above methods for placement are available to you, please review the guided self-placement process:

The following information is to support you with your math guided self-placement. Please use the information below to review prerequisite skills for each course, read the accompanying examples, and decide which math course you are best prepared for. Following your self-assessment, you will discuss your decision with your advisor who will then enter your math placement into the WCC student system.

To schedule an appointment, call 360.383.3080. If you know who your advisor is, contact them through Starfish (whatcom.edu/Starfish). To view math course descriptions and see what classes are offered during the quarter you wish to attend, visit Schedule Search at the top of the WCC home page.

FAQ:

What if I have proof of placement through recent high school transcripts, college math, or AP, IB, CLEP scores? Your advisor will confirm your math starting point and send it to the Testing Center to be entered into the student system within 48 business hours. Be sure to have your transcripts or test scores ready to show the advisor. Unofficial transcripts are acceptable for placement purposes.

What is Math Guided Self-Placement?

- Determine your confidence level when reviewing math course descriptions and outcomes.
- Reflect on your familiarity with major math concepts.
- Review sample math problems to self-assess your skill level.
- Discuss your past math experience with your academic advisor.
- Consider how math fits in with your career and academic goals/pathway.

How Does Self-Placement Work?

- Schedule a meeting with your academic advisor
- Read the course descriptions for pre-college and college-level math to become familiar with your options before meeting with your advisor
- Try to solve the sample problems for the math courses you're considering.
- Discuss in your advising meeting your possible math starting point based on your self-assessment after reading course descriptions and outcomes and working through the sample problems.

What Happens Next?

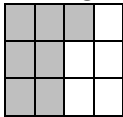
Once determined by you and your advisor, your advisor will enter your math placement into the student system within 48 business hours. Once completed, this will allow you to register yourself for your first math class at WCC.

Adult Basic Education (ABE)

ABE math classes provide a low cost option for students who want to refresh their math skills and to prepare for future classes such as Basic Math (Math 94) or Elementary Algebra I (Math 97). ABE math classes are a combination of self-paced work at your level and direct instruction in topics ranging from foundational math skills to beginning algebra.

The following topics are covered in ABE math classes Addition, Subtraction, Multiplication and Division of whole numbers; Decimals and Fractions; Ratio, Proportion, and Percent; Data, Statistics, Probability and Geometry; Algebra Basics, Expressions, and Polynomials; Equations, Inequalities and Functions.

Math 94 - Students placing into Math 94 should already have mastery of the following skills:

Outcome/Skill	Example(s)		
<i>Add, subtract and multiply whole numbers without a calculator.</i>	406×78	$394 + 275$	$6,003 - 1,257$
<i>Divide whole numbers without a calculator (including use of long division and remainders)</i>	$3053 \div 6$		
<i>Add and subtract decimals without a calculator.</i>	$2.40 + 0.73$	$5 - 2.68$	
<i>Round whole numbers to a given place value</i>	Round 273 to the nearest ten	Round 4,252 to the nearest hundred	
<i>Solve application problems involving addition, subtraction, multiplication, or division of whole numbers</i>	Emma was looking at the store inventory and sales records. One morning, the store had 457 cans of soup. The store sold 139 cans of soup during the day. How many cans of soup were left?	The kennel had 102 pounds of dog food. If they use 6 pounds a day, how many days will the 102 pounds of food last?	
<i>Answer questions involving fraction basics</i>	What fraction of the given rectangle is shaded? 	Last weekend, the flower shop had 42 customers pay with a credit card and 25 customers pay with cash. What fraction of all the payments last weekend were done with cash?	Liam had a pizza that was cut into 12 pieces. Liam ate $\frac{2}{12}$ of the pizza for lunch. He ate another $\frac{5}{12}$ of the pizza for dinner. What total fraction of the pizza did Liam eat?

Note: ABE math classes are available for students who want to refresh these math skills or to prepare for this class.

Math 97 - Students placing into Math 97 should already have mastery of the following skills:

Outcome/Skill	Example(s)		
<i>Reducing Fractions</i>	Reduce the following fraction to lowest terms. $\frac{84}{210}$		
<i>Add/Subtract/Multiply/Divide Fractions</i>	Perform the indicated operation and reduce answers to lowest terms. $\frac{5}{12} + \frac{1}{9} \qquad \frac{9}{10} - \frac{3}{20}$	$\frac{4}{15} \cdot \frac{25}{36}$	$\frac{6}{11} \div \frac{2}{3}$
<i>Decimal Place Values and Rounding</i>	Round to the nearest tenth: 0.3498	Round to the nearest hundredth: 854.2352	Round to the nearest thousandth: 2.1297
<i>Convert between Fractions, Decimals and Percentages</i>	Convert the following fraction to the equivalent decimal and percent: $\frac{5}{8}$	Convert the following decimal to the equivalent fraction and percent: 0.7	Convert the following percent to the equivalent decimal and fraction: 9%
<i>Order of Operations</i>	Evaluate using order of operations. $8 + 2(2 + 3)^2 - 7 + 3$		
<i>Add/Subtract/Multiply/Divide Signed Numbers</i>	$-14 + (-9)$ $-11 + 18$	$-6 - 5$ $-2 - (-3)$	$5(-4)$ $\frac{-54}{-9}$

Note: ABE math classes are available for students who want to refresh these math skills or to prepare for this class.

Math 98 - Students placing into Math 98 should already have mastery of the following skills:

Outcome/Skill	Example(s)		
<i>Laws of Exponents</i>	Simplify the expression $x^2 \cdot x^5$	Simplify the expression $\frac{x^6}{x^4}$	Simplify the expression $(x^3)^2$
<i>Add/Subtract/Multiply Divide Fractions with uncommon denominators</i>	Multiply; simplify if possible $\frac{2}{5} \cdot \frac{20}{9}$	Divide; simplify if possible $\frac{3}{7} \div \frac{9}{10}$	Subtract; simplify if possible $\frac{3}{8} - \frac{2}{3}$
<i>Add/Subtract/Multiply Monomials, Binomials and Polynomials</i>	Subtract; simplify if possible $(2x^2 + 5x - 1) - (x^2 - 3x - 1)$	Multiply; simplify if possible $(x - 1)(2x^2 - 5)$	Divide; simplify if possible $\frac{2x^3 + 6x^2 + 18}{2x}$
<i>Evaluate Perfect Square Roots</i>	Evaluate, if possible. If it is not possible, explain why. $\sqrt{25}$	Evaluate, if possible. If it is not possible, explain why. $-\sqrt{16}$	Evaluate, if possible. If it is not possible, explain why. $\sqrt{-9}$
<i>Evaluate Formulas</i>	Evaluate the formula below for $x = -2$ $y = \frac{5}{2}x - 1$	Evaluate the formula below for $x = -2$ $y = 2x^2 + 8$	Evaluate the formula below for $x = -2$ and $y = 3$ $z = x^2 + y^2$
<i>Plot points in a rectangular coordinate plane</i>	Plot the point (3,7) if possible. If it is not possible, explain why.	Plot the point (-2,5) if possible. If it is not possible, explain why.	Plot the point (4, -1) if possible. If it is not possible, explain why.

Math 99 - Students placing into Math 99 should already have mastery of the following skills:

Outcome/Skill	Example(s)		
<i>Operations with fractions</i>	Add $\frac{1}{4} + \frac{2}{14}$	Subtract and simplify $\frac{2}{3} - \frac{1}{6}$	
<i>Adding, subtracting and multiply polynomials</i>	Add $(2x^2 + 5x - 5) + (3x^2 - 9)$	Subtract $(2x^2 + 5x - 5) - (3x^2 - 9)$	Multiply $(5x - 5)(3x^2 - 9)$
<i>Divide monomial</i>	$\frac{12x - 6}{3}$		
<i>Factoring polynomials</i>	$2x^2 + 6x + 4$ $5x - 10x^2$	$2p^3 + 5p^2 + 6p + 15$	$x^2 - 6x + 9$
<i>Solve quadratic equations by square root method, completing the square, quadratic formula</i>	Solve by factoring $2x^2 - 5x - 3 = 0$ Solve by taking square root $x^2 = 5$	Solve by completing the square method $x^2 + 8x + 12 = 0$	Solve by the quadratic formula $2x^2 + 4x + 1 = 0$
<i>Solve linear equations</i>	Solve for x $2 = \frac{3}{4}x - 3$	Solve for y $6x + 3y = 9$	
<i>Graph a linear equation</i>	Graph the equation $y = \frac{1}{2}x + 3$		
<i>Solve proportions</i>	Solve $\frac{6}{x} = \frac{3}{4}$		

Math& 107 - Students placing into Math& 107 should already have mastery of the following skills:

Outcome/Skill	Example(s)	
<i>Convert between fraction, decimal, and percent forms of numbers</i>	Express 16% as a decimal.	Express $\frac{1}{5}$ as a percent.
<i>Round decimal number to specified place</i>	Express $\frac{2}{7}$ as a decimal, rounded to three decimal places.	
<i>Convert between scientific and standard notation for numbers</i>	Express 3.45×10^3 as a whole number (that is, express it in standard notation)	Express 0.000982 in scientific notation
<i>Use order of operations to solve algebraic equations</i>	Solve $3(x + 5) + 1 = -7(x - 4)$ for x .	
<i>Evaluate algebraic formulas for given values</i>	Suppose that a cliff diver's height (in feet) after t seconds is given by the model $H = -16t^2 + 16t + 12$. Find their height after 0.75 seconds	
<i>Use roots to solve equations with exponents</i>	Solve for x , rounding to four decimal places: $x^3 = 29$.	
<i>Find the slope of a line from two points</i>	Find the slope of the line which passes through $(-7, 7)$ and $(3, -6)$.	
<i>Graph a linear equation from slope-intercept form</i>	Sketch the graph of the line $y = 3x - 4$	
<i>Graph a line from two points</i>	Sketch the graph of the line which passes through $(1, -3)$ and $(5, 8)$	
<i>Evaluate exponential function for given values</i>	If $y = 3^x$, find the value for y when $x = -1$	
<i>Graph a basic exponential function</i>	Sketch the graph of the equation $y = 2^x$	

Math& 146 - Students placing into Math& 146 should already have mastery of the following skills:

Outcome/Skill	Example(s)														
<i>Extract information from tables and graphs</i>	The following table lists the number of repetitions (reps) a weightlifter was able to perform each day of the week.	<table border="1"> <thead> <tr> <th>Day</th> <th>Reps</th> </tr> </thead> <tbody> <tr> <td>Monday</td> <td>13</td> </tr> <tr> <td>Tuesday</td> <td>11</td> </tr> <tr> <td>Wednesday</td> <td>17</td> </tr> <tr> <td>Thursday</td> <td>13</td> </tr> <tr> <td>Friday</td> <td>18</td> </tr> </tbody> </table>	Day	Reps	Monday	13	Tuesday	11	Wednesday	17	Thursday	13	Friday	18	On what day of the week did the weightlifter perform the most reps? The least? Overall, is their performance improving?
Day	Reps														
Monday	13														
Tuesday	11														
Wednesday	17														
Thursday	13														
Friday	18														
<i>Operations with fractions (add, subtract, multiply, divide)</i>	Add: $\frac{4}{3} + \frac{5}{7}$ Subtract: $\frac{3}{8} - \frac{1}{2}$	Multiply $\left(\frac{2}{5}\right)\left(\frac{8}{5}\right)$	Divide $\frac{5}{9} \div \frac{3}{4}$												
<i>Convert between fraction, decimal, and percent</i>	What is the value of $\frac{3}{5}$ when expressed as a decimal? As a percent?	What is the value of 16% expressed as a fraction?													
<i>Round and order decimal values</i>	Round 0.38712 to the nearest hundredth.	Put the following values in order from least to greatest: 0.45 , 0.501 , 0.051 , 0.1032													
<i>Identify, interpret, and convert scientific notation</i>	Is 3.085×10^{-2} greater than 1 or less than 1 ? What would this value be when expressed as a decimal?														
<i>Represent an inequality as an interval on the number line</i>	Shade the interval $x < 5$ on a number line.														
<i>Calculate squares and square roots of perfect squares</i>	Calculate 4^2 and $\sqrt{81}$.														
<i>Use order of operations to solve for a specific variable in an algebraic equation</i>	Solve the equation $E = \frac{s}{\sqrt{n}}$ for n .														

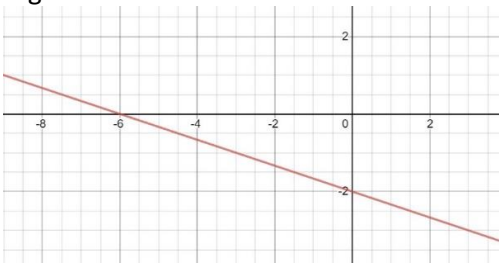
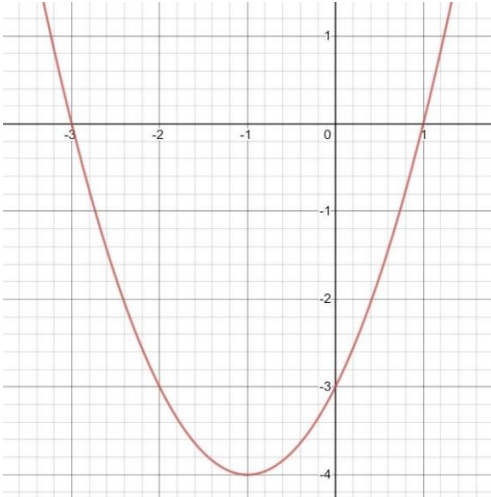
<i>Evaluate and solve algebraic equations</i>	Given the equation $y = x^2 - 16$, solve for x if $y = 0$.		
<i>Plot an ordered pair (x, y) on a graph</i>	Plot the point $(3, -7)$ on a graph.		
<i>Graph the line of a linear equation</i>	Graph the line represented by the equation $y = -\frac{3}{2}x + 5$		
<i>Interpret slope and y-intercept of a linear equation in context</i>	A salesperson's annual wages, w , are given by the equation $w = 5s + 45000$, where s is the number of items sold. What do the slope and y-intercept of this equation tell us about the salesperson's annual wages?		

Math& 141 - Students placing into Math& 141 should already have mastery of the following skills:

Outcome/Skill	Example(s)		
<i>Ability to simplify algebraic expressions including combining like terms, factoring, as well as simple radical and rational expressions. This also includes expressions involving complex numbers.</i>	Factor each of the following completely. a) $x^2 - 17x + 30$ b) $6x^3 + 3x^2 - 9x$ c) $32 - 2y^4$ d) $4x^2 - 4ax - 3x + 3a$	True or False: $(a + b)^2 = a^2 + b^2$	True or False: $\sqrt{x^2 + y^2} = x + y$
<i>Add, subtract, multiply, and/or divide algebraic expression, also including complex numbers.</i>	Simplify each of the following completely. a) $6 - 2(5a + 1) + 3(-2a + 4)$ b) $-\frac{2}{3}(6x - 3) + \frac{4}{3}(15 - 9x)$ c) $\frac{3-12x}{3}$ d) $(3a^2 - 5a + 10) - (5a^2 - 7a + 9)$ e) $(5x - 2)(x + 7)$	f) $(2x - y)^2$ g) $\sqrt{64} - \sqrt[3]{-27}$ h) $x\sqrt{27x} + \sqrt{48x^3}$ i) $(-2\sqrt{3a})(3\sqrt{12a^3})$ j) $(8 + 2i) - (-3 - 11i)$ k) $2i(3i + a)$ l) $(5 + 2i)(-2 - 3i)$	
<i>Knowledge of exponent rules including negative and rational exponents.</i>	Using the properties of exponents, simplify each of the following. Write your answer without any negative exponents. a) a^3a^{12} b) $(-2x^3y)^2$ c) $\frac{a^2b^{-1}}{a^{-2}b^3}$ d) $\left(\frac{x^4}{y^6}\right)^{-\frac{1}{2}}$ e) $\frac{(4a^2b)(9a^3b^4)}{18a^5b^6}$	Rewrite $\frac{x^{-1}}{y^{-2}}$ without the negative exponents.	Write $\sqrt[3]{a^2}$ using a rational exponent.
<i>Ability to solve equations including linear, quadratic, and some higher degree polynomials that can be factored, as well as some radical, rational equations.</i>	Solve each of the following equations. a) $4 - 5(2x - 1) = 7 - 3x$ b) $\frac{1}{3} + \frac{1}{7}x = -\frac{8}{21}$ c) $9t^2 - 25 = 0$ d) $a^2 - a + 1 = 7$ e) $(x + 3)(x - 1) = 12$ f) $2x^2 - 4x = -3$ g) $3(x - 2)^2 - 1 = 26$	h) $-\sqrt{2x + 1} = -3$ i) $\frac{4}{x} = \frac{2}{7}$ j) $\frac{2}{x} = \frac{-3}{3-5x}$ k) $\frac{1}{x} - \frac{2}{x-1} = \frac{3}{x(x-1)}$ l) $a^{\frac{3}{2}} = 8$ m) $4x^3 + 10x^2 - 6x = 0$	

Knowledge of functions including terminology such as domain & range. Be able to work with function notation, evaluate functions, and solve equations $f(x) = c$, where c is a constant.

Graphs of functions. Be able to graph linear and quadratic efficiently and/or interpret their graphs. Be able to find x- and y- intercepts of given functions algebraically.

<p>Let $f(x) = -(x + 4)^2 + 3$</p> <ol style="list-style-type: none"> Evaluate $f(-2)$ Solve $f(x) = 6$ State the vertex of this quadratic function. State the x- intercept(s) and y- intercept for this function. State the domain and range of this function. 	<p>Let $f(x) = \frac{x^2-1}{x+5}$</p> <ol style="list-style-type: none"> Evaluate $f(-2)$ Solve $f(x) = 1$ State the domain of this function. 	<p>Let $f(x) = \sqrt{x + 3}$</p> <ol style="list-style-type: none"> Evaluate $f(13)$ Solve $f(x) = 5$ State the domain and range of this function.
<p>Give an equation of the line whose graph is given below.</p> 	<p>Graph $3x - 4y = -12$ by finding the x- and y- intercepts.</p>	<p>Give an equation of the horizontal line through $(3, -5)$</p>
<p>For each of the following, state the slope of the line. If the slope is undefined, state "undefined".</p> <ol style="list-style-type: none"> Line whose equation is $y = -\frac{3}{5}x + 1$ A horizontal line. A vertical line. Line whose equation is $x - 7y = 0$ 	<p>Give an equation of the line through $(-1, 2)$ and $(3, -8)$</p>	<p>Give an equation of the vertical line through $(-7, 1)$</p>
<p>State vertex of the graph below.</p> 	<p>Consider the quadratic function</p> $f(x) = x^2 - 2x - 8.$ <p>Find the x-intercept(s), if any, y-intercept, and the vertex of this function.</p>	

Understanding of linear systems and knowledge of substitution and elimination methods.

Solve the following system using the substitution method.

$$\begin{aligned}x - 2y &= -3 \\ 3x + 4y &= 11\end{aligned}$$

Solve the following system using the elimination method.

$$\begin{aligned}2x + 3y &= -5 \\ 3x - 4y &= 1\end{aligned}$$