Homework Help

Please use the list below as a way to demonstrate the 'Big Ideas' to your class or post as a list for the class to see
where they can get help on a specific topic. All Session titles are web linked to make this process easier for you and your students. Remember
too, that the students have the ability to log in and 'Ask a Tutor' specific questions that may not be answered in the lists below. A Glossary of
Terms is also available on the Homework Help site to help with clarifying terms as the students require.

** This is a working list which will be updated as resources become available.

Grade 10 Foundations of Mathematics (MFM 2P)

Unit One: Number Sense and Algebra

Big Idea	Resource Type	Session Title
Similar triangles	Best Sessions	**Similar Triangles: determine the value of each unknown side** Find the unknown sides in a triangle pair using similar triangles and the Pythagorean Theorem.
	Listen and Learns	
	Interactive	
Pythagorean theorem	Best Sessions	**Pythagorean Theorem Part 1: How do you find the longest side of a triangle? (seminar)** Learn how to use Pythagoras Theorem to find the longest side in a triangle. **Pythagorean Theorem Part 2: How do you find one of the shorter sides of a right triangle? (seminar)** Learn how to rearrange the Pythagorean theorem so that you can use it to find one of the shorter two sides of a right triangle.
	Listen and Learns	
	Interactive	

Trigonometry	Best Sessions	**How do you find an angle using trig? Part 1: Sine (seminar)** The Sin Ratio is the length of the opposite side divided by the length of the hypotenuse. **How do you find an angle using trig? Part 2: Cosine (seminar)** Learn how to use the Cosine (cos) ratio. **How do you find an angle using trig? Part 3: Tan. (seminar)** Use the tan ratio to solve an angle in a right triangle. **How do you find an angle using trig: Part 4: How do you know which trig ratio to use? (seminar)** Determine which trig ratio (sin, cos, or tan) to use to find an angle. **Trig Ratios: What are trig ratios?** An exploration of what trig ratios are. **Trig ratios: How do you calculate trig ratios? (seminar)** Learn how to use trig ratios with right angled triangles. **Trig ratios: From a point 5m from base of a building, Lance measures the angle of elevation to the top of the building. The angle of elevation is 28'. How tall is the building?** Use trig ratios to find the height of the building. **Trig ratios: How do you finding an angle using trig? Part 1: Sine (seminar)** Use the Sin Ratio to solve for a missing angle. **Trig ratios: How do you label the sides in a Right Triangle? (seminar)** A key part of right triangle trig is learning how to properly label the triangle. **Trig Ratios: What is the Cos Ratio? (seminar)** The Cos Ratio is the length of the opposite side divided by the length of the hypotenuse. **Trig Ratios: What is the Tan Ratio? (seminar)** The Tan Ratio is the length of the opposite side divided by the length of the hypotenuse. **Trig ratios: Find the unknown angles using the inverse button on your calculator** When you know that the tan of B is 9.5144, how can you find the value of the angle B? **Trigonometry - SOH CAH TOA** Solve a right triangle using trig ratios. **How do you solve a triangle using trig? (seminar)** Use all of the trig ratios to solve all sides and angles in a right triangle.
	Listen and Learns	
	Interactive	

Imperial to metric conversions	Best Sessions	**Converting feet to inches. Which is longer 240 inches or 15 feet?** Learn to convert feet to inches.
	Listen and Learns	
	Interactive	
Surface area and volume	Best Sessions	
	Listen and Learns	
	Interactive	

Unit Two: Modelling Linear Relations

Big Idea	Resource Type	Session Title
Solving Equations	Best Sessions	**Algebra: Solve x+10=27 and 2x+10=28.** Learn how to get x by itself using opposite operations. **Solving Linear Equations: Part 1 (seminar)** How do you solve 2x - 7 = 9? **Solving Linear Equations: Part 2 of 4 (seminar)** How do you solve 3(2x + 5) = 30? **Solving Linear Equations: Part 3 of 4 (seminar)** How do you solve a/3 + a/2 = 10? **Solving Linear Equations: Part 4 (seminar)** How do you solve -3(7 + x) = -10x + 7? **Substitution: Solve a system of equations y=2-3x and 2x+3y=13** Solve this system of linear equations using substitution.
	Listen and Learns	
	Interactive	

Equation of a line	Best Sessions	**Equations of vertical lines** Understand how to create an equation for a vertical line. **How do you change y = mx + b form into standard form?** Rearrange each of three examples into Standard Form. **How do you change standard form into y = mx + b form?** Learn to convert 3x+2y-12=0 to y=-(3/2)+6 **How do you find the equation of a line given two points on the line?** Learn how to find the equation of a line, y=mx+b, given two points (1, -2) and (4, 7) on the line **How do you find the equation of a line between two points on a graph?** Plot two points on a graph and use this to find the equation. **How do you find the equation of a line when you know the slope and a point?** If the slope is 3 and you know the line passes through (2,1), what is the equation? **How do you graph lines using a table of values?** Learn to graph a line using a table of values to find the points.
	Listen and Learns	
	Interactive	
Slope = rise/run	Best Sessions	**How do you find the slope of the line between two points?** Find the slope of the line segment between (2,3) and (4,11). **How do you find the slope of a line from a graph?** Find the slope of the line between (-2,-8) and (2,4) using a graph.
	Listen and Learns	
	Interactive	
Properties of lines	Best Sessions	**Finite Differences: Linear, quadratic or nonlinear?** How do you determine if an equation is linear, quadratic or non-linear without graphing? By creating a table of values and finding the finite differences. **How do you graph y = mx + b?** Graph a line using its slope and y-intercept. **How do you know if lines are parallel, perpendicular or neither?** Determine whether these lines, y=2x-5 and y= -2x+4 are parallel, perpendicular or neither.
	Listen and Learns	
	Interactive	

Unit Three: Quadratic Relations of the Form $y = ax^2 + bx + c$

Big Idea	Resource Type	Session Title
Expand and simplify polynomials	Best Sessions	**Simplifying equations by gathering like terms.** Learn to identify and group like terms in polynomials.
	Listen and Learns	
	Interactive	
Factoring	Best Sessions	
	Listen and Learns	
	Interactive	
Difference of squares	Best Sessions	
	Listen and Learns	
	Interactive	
Graphing quadratics	Best Sessions	
	Listen and Learns	
	Interactive	
Parabola features	Best Sessions	
	Listen and Learns	
	Interactive	