

Pre-Calculus 12 Learning Guides

LG 1 Function Transformations 1

trans·for·ma·tion

A change made to a figure or a relation such that the figure or the graph of the relation is shifted or changed in shape. Examples are translations, reflections, and stretches.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 1
Worksheet: Sketching Transformations
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Transformation, Mapping, Translation, Image Point, Reflection, Invariant Point, Stretch.

What Will I Have To Do?

1.1 Horizontal and Vertical Translations

Read: P. 6 - 12

Do: P. 12 1ac, 2ac, 3, 4ac
P. 13 5, 6, 7, 8, 9ab, 10ab, 11
P. 15 17, 18, 19a
P. 16 C3, C4

1.2 Reflections and Stretches

Read: P. 16 - 27

Do: P. 28 1, 2, 3, 4, 5, 6, 7
P. 29 9
P. 31 14, 15
P. 31 C2, C3

Do Worksheet on Sketching Transformations

Am I Ready For Evaluation?

Review P. 56 1 – 8

Test P. 56 1 – 14

Formative or Summative?

**See your teacher to get the
Formative Assessment.**

*“Be sure to keep all of your Formative
Assessments for further review.”*

Pre-Calculus 12 Learning Guides

LG 2 Function Transformations 2

trans·for·ma·tion

A change made to a figure or a relation such that the figure or the graph of the relation is shifted or changed in shape. Examples are translations, reflections, and stretches.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 1
Worksheet Combining Transformations
Describing Transformations
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Inverse of a Function, Horizontal Line Test.

What Will I Have To Do?

1.3 Combining Transformations

Read: P. 32 - 38

Do: P. 38 1, 2, 3, 4, 5, 6
P. 40 7, 8, 9cef, 10, 14ab
P. 41 15, 17

Do Worksheet on Combining Transformations

Do Worksheet on Describing Transformations

1.4 Inverse of a Relation

Read: P. 44 - 51

Do: P. 51 1, 2, 3, 4, 5, 6
P. 53 8c, 9abc, 12ae, 15, 16
P. 55 20, 21

Am I Ready For Evaluation?

Review P. 56 9 - 14

Test P. 56

Go Over Formative Quiz from LG 1

Formative or Summative?

**Go to the Testing Centre to do the
LG 1/2 Summative Test.**

Pre-Calculus 12 Learning Guides

LG 3 Exponential Functions

exp·o·nen·tial function

A function of the form $y = ca^x$, where c is a constant ($c > 0, c \neq 1$) and x is a variable.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 7
Worksheet: Exponential Equations
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Exponential Function, Exponential Growth,
Exponential Decay, Half-life, Exponential
Equation.

What Will I Have To Do?

7.1 Characteristics of Exponential Functions

Read: P. 334 - 342

Do: P. 342 1, 3, 4, 5ac
P. 343 6-10, 12

7.2 Transformations of Exponential Functions

Read: P. 346 - 354

Do: P. 354 1, 2, 3ace, 4, 6
P. 355 7, 9, 11, 12
P. 357 13, 14
P. 357 C1, C2

Do Worksheet on Exponential Equations

7.3 Solving Exponential Equations

Read: P. 358 - 363

Do: P. 364 1, 2, 4, 5, 6ac, 7aceg
P. 364 9, 10, 11, 12, 13, 14
P. 365 15a

Am I Ready For Evaluation?

Review P. 366 1 - 12

Formative or Summative?

See your teacher to get the
Formative Assessment.

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 4 Logarithmic Functions

log·a·rith·mic function

A function of the form $y = \log_c x$, where c is a constant ($c > 0$, $c \neq 1$) and x is a variable. It is the inverse of the exponential function $y = ca^x$.

What Resources Do I Need?

To complete this unit you will need:

Text:	Pre-Calculus 12 - Chap. 8
Worksheets	Introduction to Logarithms Base Change & Log Laws Logarithmic Equations
Technology:	Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Logarithmic Function, Logarithm, Common Logarithm, Logarithmic Equation.

What Will I Have To Do?

Do Worksheet on Introduction to Logarithms

8.1 Understanding Logarithms

Read: P. 372 - 379

Do: P. 380 2, 3, 4, 6, 7, 8a, 9a
P. 381 10-15, 16, 19, 20
P. 381 22-23

8.2 Transformations of Log. Functions

Read: P. 383 - 389

Do: P. 389 1, 2, 3, 4ab, 5, 6, 7
P. 390 8, 9, 11
P. 391 16
P. 391 C1

8.3 Laws of Logarithms

Read: P. 392 - 400

Do: P. 400 1, 2, 3, 5
P. 400 6, 7, 8, 9, 10, 11, 12

Do Worksheet on Base Change & Log Laws

8.4 Logarithmic and Exponential Equations

Read: P. 404 - 412

Do: P. 412 1, 2, 4, 5
P. 413 7, 8, 13
P. 415 21, 22

Do Worksheet on Logarithmic Equations

Am I Ready For Evaluation?

Deja Revu: There will be 1 transformation, & 1 inverse function.

Review P. 416 1 - 23

Test P. 368

Test P. 419

Go Over Formative Quiz from LG 3

Formative or Summative?

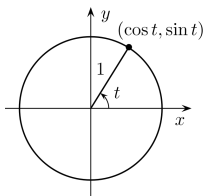
Go to the Testing Centre to do the LG 3/4 Summative Test.

Pre-Calculus 12 Learning Guides

LG 5 Trig Ratios and Degrees

un·it cir·cle

A circle with radius 1 unit with its centre at the origin on the Cartesian plane.



What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 4
Worksheets Ratios and Degrees
Trig Ratios From Ratios

Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Radian, Co-terminal Angles, General Form, Unit Circle, Cosecant, Secant, Cotangent, Trigonometric Equation.

What Resources Do I Need?

4.1 Angles and Angle Measure

Read: P. 166 - 175

Do: P. 175 1bc, 6bdf, 7ace, 8cd, 9ac,
11abc

4.2 The Unit Circle

Read: P. 180 - 186

Do: P. 186 2ace, 3ace

Do Worksheet on Ratios and Degrees

4.3 Trigonometric Ratios

Read: P. 191 - 201

Do: P. 201 1efgl, 2bcl, 3ace, 6acd, 7cd
P. 202 9abc, 12cd, 14ac
P. 203 20

Do Worksheet on Trig. Ratios From Ratios

Am I Ready For Evaluation?

Do: Review Sheet from Resource Pkg.

Formative or Summative?

**See your teacher to get the
Formative Assessment.**

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 6 Trig. Ratios and Radians

ra·di·an

One radian is the measure of the central angle subtended in a circle by an arc equal in length to the radius of the circle. $2\pi = 360^\circ = 1$ full rotation (or revolution)

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 4
Worksheets Ratios and Radians
Trig. Ratios From Ratios
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Radian, Co-terminal Angles, General Form, Unit Circle, Cosecant, Secant, Cotangent, Trigonometric Equation.

What Will I Have To Do?

4.1 Angles and Angle Measure

Read: P. 166 - 175

Do: P. 175 1ad, 2ace, 4, 6ace, 7bdf, 8ab, 9bd, 11defgh, 12ab, 13abc
P. 176 14, 17, 20ab

4.2 The Unit Circle

Read: P. 180 - 186

Do: P. 186 2bdf, 3bdf

Do Worksheet on Ratios and Radians

4.3 Trigonometric Ratios

Read: P. 191 - 201

Do: P. 201 1cdgh, 2dejk, 3bdf, 4bdf, 6bef
P. 202 9cef, 12ab

Do Worksheet on Ratios From Ratios

Am I Ready For Evaluation?

Do: Review Sheet from Resource Pkg.

Deja Revu: There will be 2 transformations, 1 logarithm equation & 1 exponential equation.

Test P. 218

Go Over: Formative Quiz from LG 5

Formative or Summative?

Go to the Testing Centre to do the LG 5/6 Summative Test.

Pre-Calculus 12 Learning Guides

LG 7 Trig Functions & Graphs

trig·on·o·met·ric func·tion

Trigonometric functions are functions of an angle, and are important in the study of triangles and modeling periodic phenomena. Trigonometric functions are commonly defined as ratios of two sides of a right triangle containing the angle, and can equivalently be defined as the lengths of various line segments from a unit circle.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 5
Worksheets: Trig Graphs
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Periodic Function, Period, Sinusoidal Curve, Amplitude, Vertical Displacement, Phase Shift.

What Will I Have To Do?

5.1 Graphing Sine and Cosine Functions

Read: P. 222 - 232

Do: P. 233 1, 2, 3, 4, 5
P. 233 6, 7, 8, 9, 10, 11, 12, 14, 15
P. 236 20, 21
P. 236 C4

5.2 Transformations of Sinusoidal Functions

Read: P. 238 - 249

Do: P. 250 1, 2, 3, 4, 5
P. 251 6, 7, 9, 10, 11, 12, 13, 14,
15, 16, 23
P. 254 26, 27
P. 255 C4

Do Worksheet on Trig Graphs

Am I Ready For Evaluation?

Do: Review Sheet from Resource Pkg.

Formative or Summative?

See your teacher to get the
Formative Assessment.

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 8 Trig Functions & Graphs

tan·gent func·tion

The trigonometric function of an acute angle in a right triangle that is the ratio of the length of the side opposite the angle to the length of the side adjacent to the angle.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 5
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Periodic Function, Period, Sinusoidal Curve, Amplitude, Vertical Displacement, Phase Shift.

What Will I Have To Do?

5.3 The Tangent Function

Read: P. 256 - 262

Do: P. 262 1, 2, 3
P. 263 9, 10, 12, 13
P. 265 C1, C2

5.4 Eqs and Graphs of Trig Functions

Read: P. 266 - 274

Do: P. 275 1, 2, 3, 4, 5cd, 6, 8
P. 276 9, 10, 12, 15, 17, 18, 19, 21
P. 280 C1, C2

Am I Ready For Evaluation?

Deja Revu: There will be 1 transformation, 1 logarithm equation & exponential equations & 2 trigonometric ratios.

Review P. 282 1 – 24 (not 16)

Test P. 286

Go Over Formative Quiz from LG 7

Formative or Summative?

Go to the Testing Centre to do the LG 7/8 Summative Test.

Pre-Calculus 12 Learning Guides

LG 9 Preparing For The Midterm

mid-term

An examination, set of questions or exercises evaluating skill or knowledge administered in the middle of an academic term.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12
Worksheet: Review Package
Technology: Graphing Calculator (TI-83+)

What Will I Have To Do?

Do: Review Sheet for LG 1-8

Review: Deja Revu Package
Formative Quizzes

Am I Ready For Evaluation?

Do: Review Sheet from Resource Pkg.

Optional

Review: P. 158 1 – 6

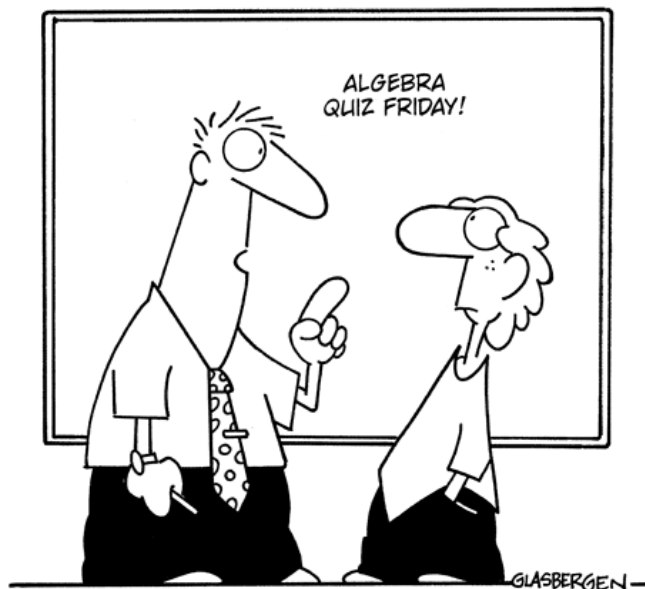
Review: P. 326 1 – 9, 14 – 20

Review: P. 422 1 – 20

Formative or Summative?

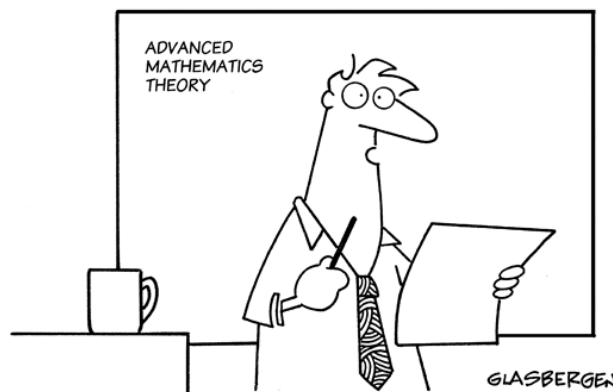
Go to the Testing Centre to do the Midterm test.

© Randy Glasbergen / glasbergen.com



"It's important to learn math because someday you might accidentally buy a phone without a calculator."

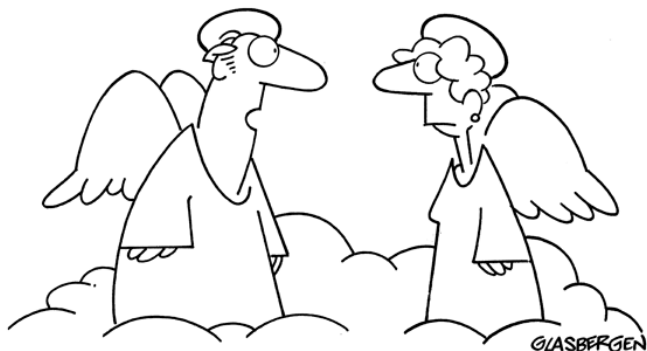
© Randy Glasbergen / glasbergen.com



"Today's test is 70% of your final grade which makes up 35% of your grade for the semester and 20% of your GPA for 50% of your scholastic career for 15% of the curriculum. If you can explain this to the person next you, you pass the test."

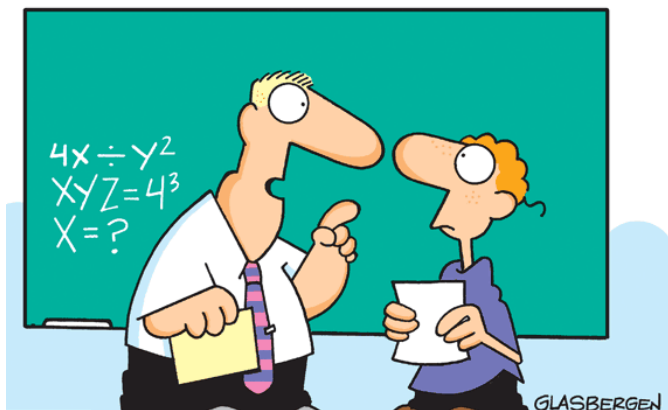
Pre-Calculus 12 Learning Guides

© Randy Glasbergen.
www.glasbergen.com



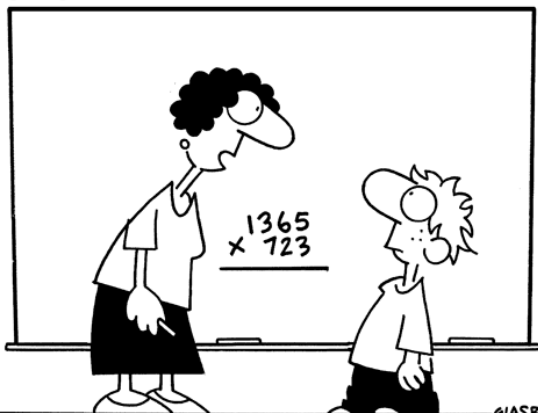
"In 1953 you were my math teacher. You promised that algebra would come in handy someday. How much longer do I have to wait?"

© Randy Glasbergen. www.glasbergen.com



"Algebra will be important to you later in life because there's going to be a test six weeks from now!"

Copyright 2005 by Randy Glasbergen.
www.glasbergen.com



"Pretend you're starring in a reality show about a kid who can make his dreams come true if he works hard and gets good grades."

Copyright 1996 Randy Glasbergen. www.glasbergen.com



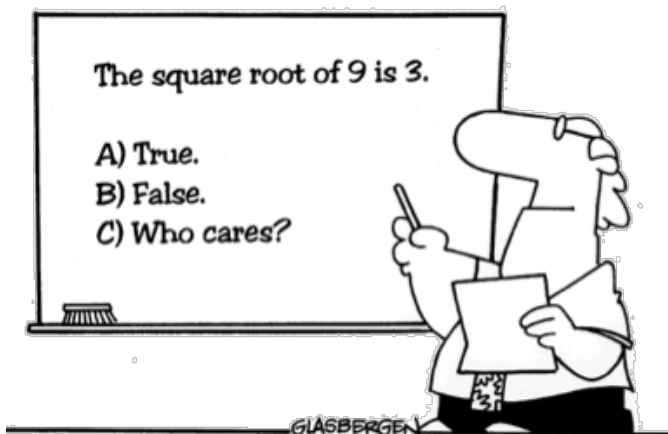
"Teachers are fighting back against kids who cut class. Today I was the victim of a drive-by math quiz!"

© Randy Glasbergen
www.glasbergen.com



"No, I can't explain my D in math. That class teaches us about numbers, not letters!"

Copyright 1996 Randy Glasbergen. www.glasbergen.com



Many students actually look forward to Mr. Abbott's math tests.

Pre-Calculus 12 Learning Guides

LG 10 Trigonometric Identities

trig·on·o·met·ric i·den·ti·ty

A trigonometric equation that is true for all permissible values of the variable in the expressions on both sides of the equation.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 6
Worksheets Trig Identity Proofs 1
Sum & Diff./ Double Angles
Trig Identity Proofs 2
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Trigonometric Identity, Double-Angle, Sum or Difference, Pythagorean, Quotient.

What Will I Have To Do?

6.1 Reciprocal, Quotient and Pythagorean Identities

Read: P. 290 - 296

Do: P. 296 1, 2, 3, 4, 5, 6
P. 297 10, 11c, 12b, 14, 16
P. 298 C2

Do Worksheet on Trig. Identities Proofs

Do Worksheet on Sum & Diff./Double Angles

6.2 Sum, Difference and Double-Angle Identities

Read: P. 299 - 305

Do: P. 306 1, 2, 3, 4, 5, 7, 8
P. 306 10, 11, 12a, 15, 16a, 17, 18, 19, 20

6.3 Proving Identities

Read: P. 309 - 313

Do: P. 314 1, 2, 3, 4, 7
P. 314 8, 10, 11, 12, 13, 15, 17, 18
P. 315 C2

Do Worksheet on Trig. Identity Proofs 2

Am I Ready For Evaluation?

Review P. 322 1 - 15 (Not 5, 6)

Formative or Summative?

See your teacher to get the Formative Assessment.

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 11 Trigonometric Equations

trig·on·o·met·ric e·qua·tion

Trigonometric functions are functions of an angle, and are important in the study of triangles and modeling periodic phenomena. Trigonometric functions are commonly defined as ratios of two sides of a right triangle containing the angle, and can equivalently be defined as the lengths of various line segments from a unit circle.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 5
Worksheets Trig Equations 1
Trig Equations 2
Trig Equations 3
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Trigonometric Equation, General Solution.

What Will I Have To Do?

Do Worksheet 1 on Trig Equations

4.4 Introduction to Trigonometric Equations

Read: P. 205 - 211

Do: P. 211 12, 3, 4ace, 5, 6, 7
P. 212 10, 11, 12, 15, 17, 18
P. 213 22

Do Worksheet 2 on Trig Equations

6.4 Solving Trigonometric Equations Using Identities

Read: P. 316 - 320

Do: P. 320 1, 2, 3, 5
P. 321 8, 10, 11

Do Worksheet 3 on Trig Equations

Am I Ready For Evaluation?

Deja Revu: There will be 1 transformation, 1 logarithm equation & exponential equation, 1 trig. ratio & 1 trig. graph.

Review P. 282 1 - 24

Test P. 314 Not 9

Go Over Formative Quiz from LG 10

Formative or Summative?

Go to the Testing Centre to do the LG 10/11 Summative Test.

Pre-Calculus 12 Learning Guides

LG 12 Polynomial Functions

pol·y·no·mi·al func·tion

A function of the form:

$f(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_2 x^2 + a_1 x + a_0$, where n is a whole number, x is a variable and the coefficients a_n to a_0 are real numbers.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 3
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Polynomial Function, End Behaviour, Synthetic Division, Remainder Theorem, Factor Theorem, Integral Zero Theorem, Multiplicity (of a zero).

What Will I Have To Do?

3.1 Characteristics of Polynomial Functions

Read: P. 106 - 113

Do: P. 114 1, 2, 3, 4
P. 115 6, 7
P. 116 11, 12ab
P. 116 C4

3.2 The Remainder Theorem

Read: P. 118 - 123

Do: P. 124 4ace, 5ace, 6ace, 7, 8
P. 124 9

3.3 The Factor Theorem

Read: P. 126 - 133

Do: P. 133 1, 2ace, 3ace, 5ace, 6ace
P. 134 7
P. 135 16a

3.4 Equations and Graphs of Polynomial Functions

Read: P. 136 - 147

Do: P. 147 1, 2, 3, 4, 5, 7, 9ace

Am I Ready For Evaluation?

Review P. 153 1 – 14 (not 12)

Formative or Summative?

**See your teacher to get the
Formative Assessment.**

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 13 Function Operations

function operations

Functions can be added, subtracted, multiplied and divided to create a new function. For example:

$$\text{Given: } f(x) = 2x + 3, g(x) = x^2$$

$$\begin{aligned}(f+g)(x) &= f(x) + g(x) \\ &= (2x + 3) + (x^2) = x^2 + 2x + 3\end{aligned}$$

$$\begin{aligned}(f-g)(x) &= f(x) - g(x) \\ &= (2x + 3) - (x^2) = -x^2 + 2x + 3\end{aligned}$$

$$\begin{aligned}(fg)(x) &= f(x) \cdot g(x) \\ &= (2x + 3)(x^2) = 2x^3 + 3x\end{aligned}$$

$$\begin{aligned}(f/g)(x) &= f(x) \div g(x) \\ &= (2x + 3) \div (x^2) = \frac{2x + 3}{x^2}, x \neq 0\end{aligned}$$

Be careful of the domain, though, and watch for restricted or non-permissible values.

$$\begin{aligned}(f \circ g)(x) &= f(g(x)) \\ &= 2(x^2) + 3 = 2x^2 + 3\end{aligned}$$

$$\begin{aligned}(g \circ f)(x) &= g(f(x)) \\ &= (2x + 3)^2 = 4x^2 + 12x + 9\end{aligned}$$

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 10
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Composite Function.

What Will I Have To Do?

10.1 Sums and Differences of Functions

Read: P. 474 - 483

Do: P. 483 1ac, 2ac, 3ac, 4ac, 6, 7, 8a
P. 484 9ac, 10ac, 11ac

10.2 Products and Quotients of Functions

Read: P. 488 - 495

Do: P. 496 1ac, 2, 3, 4a, 5a
P. 496 6ac, 7ac, 8ac, 9b, 10a

10.3 Composite Functions

Read: P. 499 - 506

Do: P. 507 1, 2, 3, 4ace, 5, 7
P. 507 14ab, 18, 22
P. 509 C2

Am I Ready For Evaluation?

Deja Revu: There will be 1 logarithm equation & exponential equations, 1 trig. graph, 1 trig. identity & 1 trig. equation.

Review P. 510 1 - 14 (not 5)

Test P. 155 Not 3

Test P. 512 Not 7, 11, 12

Go Over Formative Quiz from LG 12

Formative or Summative?

Go to the Testing Centre to do the LG 12/13 Summative Test.

Pre-Calculus 12 Learning Guides

LG 14 Radical Functions

rad·i·cal func·tion

A function that involves a radical with a variable in the radicand. For example, $y = \sqrt{3x}$ and $y = 4\sqrt[3]{5+x}$ are radical functions.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 2
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Radical Function, Square Root of a Function.

What Will I Have To Do?

2.1 Radical Functions and Transformations

Read: P. 62 - 72

Do: P. 72 1ac, 2, 3, 4abd
P. 73 9, 10, 11, 13ab, 16

2.2 Square Root of a Function

Read: P. 78 - 85

Do: P. 86 2, 3, 5ac, 6ab, 8
P. 87 11
P. 89 16, 17abc

2.3 Solving Radical Equations Graphically & Algebraically

Read: P. 90 - 96

Do: P. 96 2ab, 3ac, 5ac, 6ac, 7abc
P. 97 14
P. 98 16, 17

Am I Ready For Evaluation?

Review P. 99 2, 3, 4, 5, 7, 8a, 9ac, 10a, 12, 14, 16

Formative or Summative?

See your teacher to get the Formative Assessment.

“Be sure to keep all of your Formative Assessments for further review.”

Pre-Calculus 12 Learning Guides

LG 15 Rational Functions

rational function

A function written in the form $f(x) = \frac{p(x)}{q(x)}$, where

$p(x)$ and $q(x)$ are polynomial expressions and $q(x) \neq$

0. Some examples are: $y = \frac{20}{x}$, $c(n) = \frac{100 + 2n}{n}$,

and $f(x) = \frac{3x^2 + 4}{x - 5}$

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 9

Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Rational Function, Point of Discontinuity.

What Will I Have To Do?

9.1 Exploring Rational Functions Using Transformations

Read: P. 430 - 441

Do: P. 442 1, 2bc, 3, 4

P. 443 7, 8, 9a, 12

P. 445 20, 21

9.2 Analysing Rational Functions

Read: P. 446 - 451

Do: P. 451 1a, 2(calc), 4, 5, 6

P. 453 7, 8, 10, 14ab, 16

P. 455 20, 21a

9.3 Connecting Graphs and Rational Equations

Read: P. 457 - 465

Do: P. 465 3, 4, 5bc, 6ab

P. 466 9, 11

Am I Ready For Evaluation?

Deja Revu: There will be 1 transformation, 1 trig. equation, 1 trig. identity & 1 function operation.

Review P. 468 1 - 10 (not 3, 4)

Test P. 102

Test P. 470

Go Over Formative Quiz from LG 12

Formative or Summative?

Go to the Testing Centre to do the LG 14/15 Summative Test.

Pre-Calculus 12 Learning Guides

LG 16 Combinatorics

per·mu·ta·tion

An ordered arrangement or sequence of all or part of a set. For example, the possible permutations of the letters A, B, and C are:
ABC, ACB, BAC, BCA, CAB, and CBA.

com·bin·a·tion

A selection of objects without regard to order. For example, all of the three-letter combinations of P, Q, R, and S are: PQR, PQS, PRS, and QRS. Arrangements such as PQR and RPQ are the same combination.

bi·nom·ial the-or-em

Used to expand $(x + y)^n$, $n \in N$; where each term has the form ${}_nC_k(x)^{n-k}(y)^k$, where $k + 1$ is the term number.

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12 - Chap. 11
Worksheets Pathways
Permutations & Combinations
Technology: Graphing Calculator (TI-83+)

What Words Will I Need To Know?

You will need to understand:

Fundamental Counting Principle, Factorial, Permutation, Combination, Binomial Theorem.

What Will I Have To Do?

11.1 Permutations

Read: P. 516 - 524

Do: P. 524 1 – 11
P. 525 12 – 20, 22, 23, 25, 26, 27
P. 527 C3a

Do Worksheet 1 on Pathways

11.2 Combinations

Read: P. 528 - 533

Do: P. 534 1, 2, 3, 4, 5, 6, 8, 9
P. 534 10, 11, 13, 14, 15a, 17 – 20
P. 536 C1

Do Worksheet 2 on Permutations & Combinations

11.3 The Binomial Theorem

Read: P. 537 - 541

Do: P. 542 1 – 7
P. 542 11ab, 12, 16, 17, 18, 19, 20

Am I Ready For Evaluation?

Deja Revu: There will be 1 given $f(x)$ sketch $y = \sqrt{f(x)}$, 1 log equation, 1 rational equation, & 1 trig. equation.

Review P. 546 1 – 18 (not 10, 15)

Test P. 548

Formative or Summative?

Go to the Testing Centre to do the LG 16 Summative Test.

Pre-Calculus 12 Learning Guides

LG 17 Preparing For Final Exam

re·view

To look over, study, or examine again. To go over or restudy material: *reviewing for a final exam.*

What Resources Do I Need?

To complete this unit you will need:

Text: Pre-Calculus 12
Technology: Graphing Calculator (TI-83+)

What Will I Have To Do?

Do: Review Package for LG 1-16

Review: Deja Revu Package

Optional

Review: P. 158 1 – 18

Review: P. 326 1 – 27

Review: P. 422 1 – 20

Review: P. 550 1 – 22

Formative or Summative?

There is no evaluation for these guides. You must hand in your reviews to your teacher, showing all your working. Your mark will be based on the completeness of your reviews.

LG 18 The Final Exam

ex·am·i·na·tion

The act of examining or the state of being examined. A set of questions or exercises testing knowledge or skill.

What Will I Have To Do?

Write the final exam.

Formative or Summative?

Write the **test** in the testing center. You may be allowed to write up to 3 different final exams. Your best score will count for LG 18.