

*Student Name* \_\_\_\_\_ *Date Submitted* \_\_\_\_\_

## CALCULUS 12 (online)

### Section 1.0 Send-In

---

Complete this send-in as part of your course enrollment. This will be your first mark entered for the course. When this assignment has been received by SCIDES, your course materials will be sent to you.

**This send-in consists of:**

- Calculus 12 Course Planner \_\_\_\_\_ / 5 marks
- Prep Assignment \_\_\_\_\_ / 10 marks

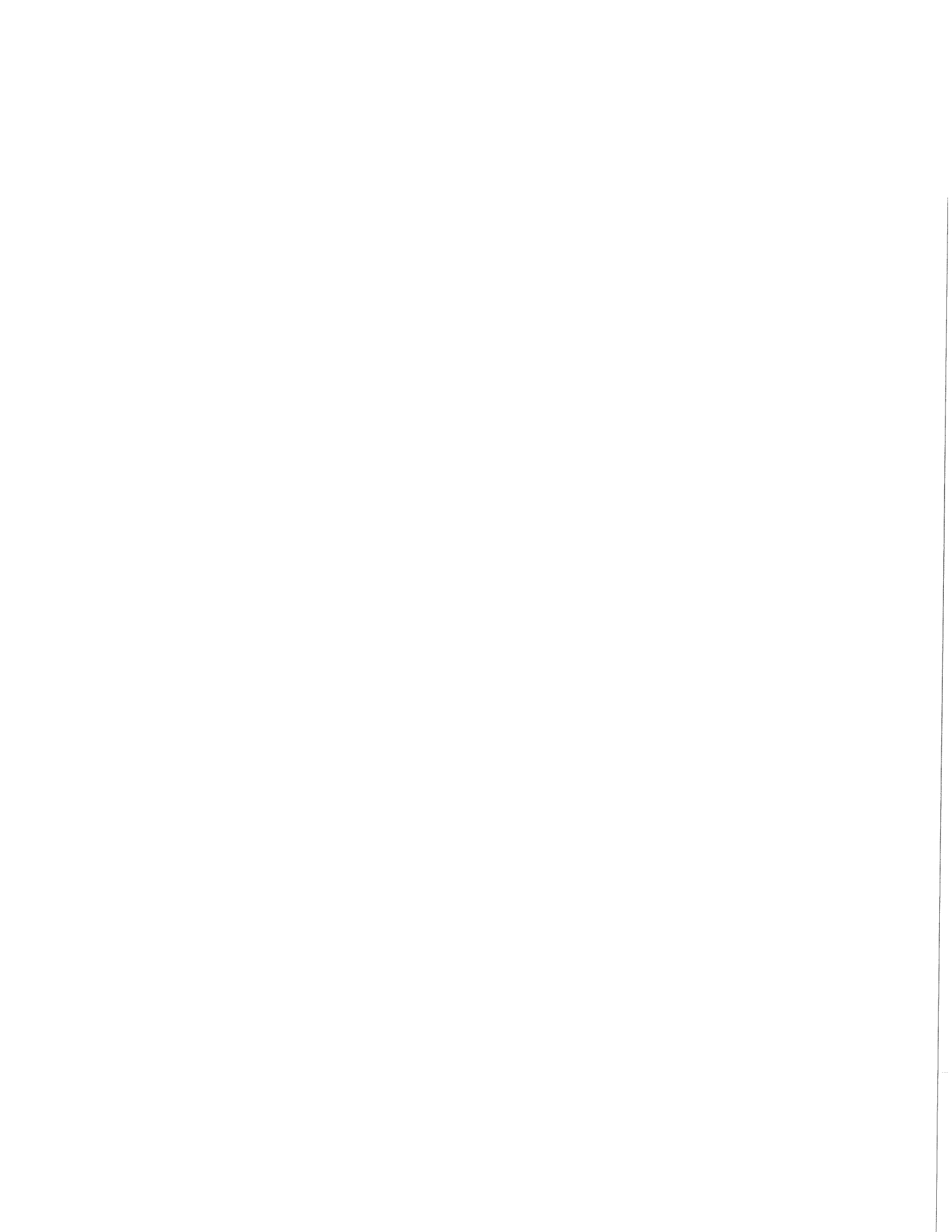
TOTAL: \_\_\_\_\_ / 15 marks \_\_\_\_\_ %



**Mail:**

- 1) This Cover Sheet
- 2) **Return Address** (page 2 or Comment Sheet) – Fill out with your complete name and address.
- 3) **Send-In Assignments** – Completed Planner and Prep assignments.

*Be sure to put proper **postage** on the envelope (if necessary) and add your **return address**.*



You are **REQUIRED** to fill out your return address on this page if you **DOWNLOADED** this Assignment. [If the Assignment was mailed to you, please fill out the back of the white page of the 3 part District Education Comment Sheet.]

***Please Print Clearly***

NAME
ADDRESS
CITY / TOWN
PROVINCE / COUNTRY
POSTAL CODE

**Complete your MAILING address.**

Is this a change of address?     Yes     No

Name: \_\_\_\_\_

\_\_\_ / 5 marks

## Calculus 12 Course Planner

**Part I - Complete all the following contact information that applies to you and check the one that is the best way to contact you during the day:**

Home Phone: \_\_\_\_\_  Work Phone: \_\_\_\_\_  Cell: \_\_\_\_\_

Email: \_\_\_\_\_

other way to contact you (explain) \_\_\_\_\_

**When is the best time for your teacher or tutor/marker to contact you?** \_\_\_\_:\_\_\_\_ AM PM

**Check your Grade:**  Grade 9  Grade 10  Grade 11  Grade 12  Graduated

---

### Timetable Options/Course Plan

---

One of the keys to being successful in anything that you do is to take the time to plan carefully. The objective of this section is to help you create a timetable for managing your schoolwork and enable you to set goals for finishing all of your courses by your desired completion date. **Most full-time students complete 3 to 5 assignments each week.**

The flexibility of our distributed learning program offers you many choices but a plan for completion is essential to success. Most full-time students complete 8 courses in a school year (10 months). The most common timetables are 'semestered' (4 courses at a time) or "linear" (8 courses at a time).

**What is your planned schedule?**  Semester System (22 weeks)  Linear System (44 weeks)

other: (*explain*) \_\_\_\_\_

**What is your intended START date for this course?**  Now  other date: \_\_\_\_\_

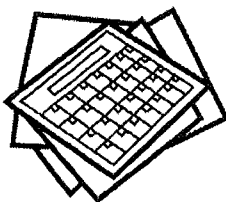
**What is your intended completion date for this course?** \_\_\_\_\_ (month) \_\_\_\_\_ (year)

How many courses are you taking with us this year? \_\_\_\_ How many with other schools/programs? \_\_\_\_

Calculus 12 consists of 10 send-in assignments, 5 quizzes, and 5 module tests. How many assignments/tests per week must you do to complete this course as planned? \_\_\_\_\_



- *Mark target submission dates on a calendar.*
- *Add this same information from other courses to help you create a schedule for completion.*
- *Record the actual dates you submit work so you can track your progress.*



---

**Anything else?**

---

Is there anything else you would like us to know about you or your education plans or learning style that will help us provide you with better service?

**Calculus 12** is designed to be an online supported course. The actual instruction along with the list of suggested practice questions is found online. This instruction follows the text, CALCULUS 5<sup>th</sup> Edition by Stewart, very closely. If you do not have internet access, you can do this course by working your way through the text. However, you will then have to pick and choose your own set of practice questions.

All assignments, quizzes, and tests are done on paper. When you receive your course materials, included will be a set of photocopied assignments and quizzes which you will submit for marking as you complete them. The tests will be sent to your Test Site where you will write them under supervised conditions.

If you have any questions, please call 1-800-663-3536.

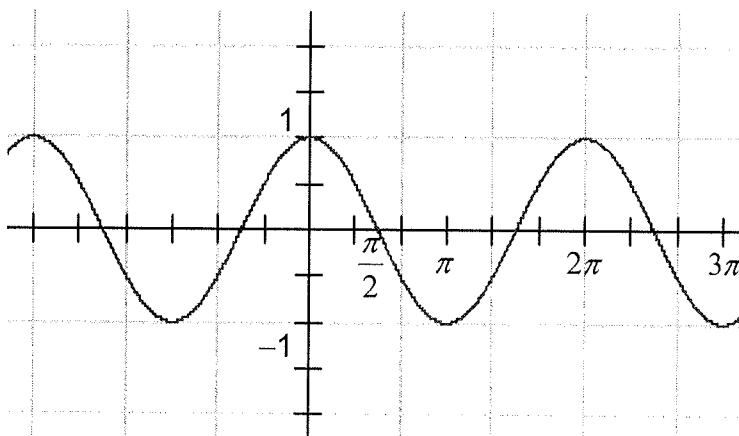
## Calculus 12 Online – Introduction to Calculus – Module 1

Preparatory Assignment

Name : \_\_\_\_\_

Choose the best answer for each of the following questions. (10 marks)

#1. Which equation represents the function graphed below?



A.  $y = \cos\left(x - \frac{\pi}{2}\right)$

B.  $y = \sin\left(x - \frac{\pi}{2}\right)$

C.  $y = -\cos\left(x - \frac{\pi}{2}\right)$

D.  $y = -\sin\left(x - \frac{\pi}{2}\right)$

#2. Determine an equivalent expression to  $\sin(2x - \pi)$ .

A.  $2\sin x \cos x$

B.  $-2\sin x \cos x$

C.  $\cos^2 x - \sin^2 x$

D.  $\sin^2 x - \cos^2 x$

#3. Determine the restriction(s) for the expression  $\frac{\tan \theta}{2\cos \theta - 1}$ .

A.  $\cos \theta \neq \frac{1}{2}$

B.  $\sin \theta \neq 0$

C.  $\sin \theta \neq 0, \cos \theta \neq \frac{1}{2}$

D.  $\cos \theta \neq 0, \cos \theta \neq \frac{1}{2}$

#4. If the point  $(-2, -5)$  is on the graph of  $y = f(x)$ , which point must be on the graph of  $y = |f(x-1)| - 3$  ?

- A.  $(-3, 2)$       B.  $(-1, 2)$       C.  $(1, -8)$       D.  $(3, -8)$

#5. Change to standard form  $2x^2 - 3y^2 + 12y = 0$  .

- A.  $\frac{x^2}{6} - \frac{(y+2)^2}{4} = -1$       B.  $\frac{x^2}{6} - \frac{(y-2)^2}{4} = -1$   
C.  $\frac{x^2}{2} - \frac{(y+2)^2}{\frac{4}{3}} = 1$       D.  $\frac{x^2}{2} - \frac{(y-2)^2}{\frac{4}{3}} = 1$

#6. Determine a possible value for  $D$  such that  $x^2 + y^2 + Dx - 6y - 4 = 0$  represents a circle with radius 7.

- A. 6      B. 12      C. 18      D. 36

#7. Determine the sum of the infinite geometric series  $3 + \frac{6}{5} + \frac{12}{25} + \dots$

- A. 5      B. 7.5      C. 12.5      D. 15

#8. Determine an equivalent expression for  $\log a + 2\log b - 3\log c$  .

- A.  $\log \frac{ab^2}{c^3}$       B.  $\log \frac{a}{b^2c^3}$   
C.  $\log \frac{a}{6bc}$       D.  $\log \frac{2ab}{3c}$

#9. A population grows continuously according to the formula  $P = P_0 e^{kt}$ , where  $P$  is the final population in  $t$  years,  $P_0$  is the initial population, and  $k$  is the continuous growth rate. For how long (in years) has the population been growing if the present population is 29 500, the initial population was 12 000, and the continuous growth rate was 7.5%?

- A. 5.21      B. 12.0      C. 18.4      D. 32.8

#10. Given  $f(x) = 2^x + 5$ , determine the inverse  $f^{-1}(x)$ .

A.  $f^{-1}(x) = 5 + \log_2 x$

B.  $f^{-1}(x) = -5 + \log_2 x$

C.  $f^{-1}(x) = \log_2(x + 5)$

D.  $f^{-1}(x) = \log_2(x - 5)$