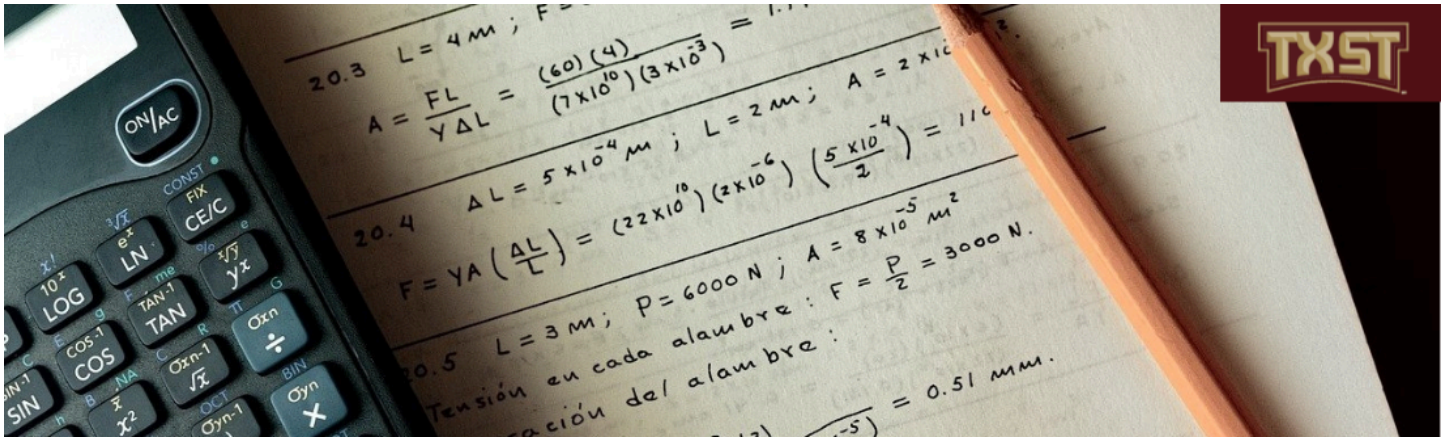
Home

MATH 1319:
Mathematics for Business and Economics 1



- Start Here
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- Modules
- Course Pacing Guide

Welcome to MATH 1319: Mathematics for Business and Economics 1

Course Overview/Description

This course covers topics from college algebra and economics including applications of equations and inequalities, simple and compound interest and annuities. Prerequisite: Math 1311 with a grade of CR, or a grade of C or higher, ACT Mathematics score of 21 or more, SAT Mathematics score of 480 or more, Accuplacer College Mathematics score of 63 or more, Compass Algebra score of 66 or more.

This course is divided into four lessons. Within each lesson you will find:

- An overview and objectives;

- Assigned reading in the textbook;
- Practice problems (not graded) with narrated examples; and
- An assignment (graded).

Course Instructor

Shawn Peterson

Email:mp54@txstate.edu

You are welcome to e-mail me at mp54@txstate.edu. My policy is that during nonholiday breaks or announced away times, any email I receive between Monday morning and Friday at noon will receive a reply within 48 hours. Emails received between Friday at noon and Sunday night will receive a reply on the next business day.

Ready to begin?

Click **Start Here** in the navigation bar above to begin your course.

Returning to this course?

Click **Modules** in the navigation bar above or in the left-hand course navigation and resume where you left off.

Questions about the course?

You are encouraged to contact your instructor, if you have any concerns, questions, or problems.

Please send an email to mp54@txstate.edu. I will respond to all emails I receive from Monday morning to Friday at noon within 48 hours. Emails received between Friday at noon and Sunday night will receive a reply on the following business day. During holiday breaks or announced away times, I may not be readily available.

To ensure timely delivery of all e-mails related to this course, you must use your official Texas State Bobcat Mail email address.

You may contact Online and Extended Programs using the email address provided.

Email: **corrstudy@txstate.edu**

Meet Your Instructor

Start Here

Meet Your Instructor

About Me

Welcome to MATH 1319! My name is Shawn Peterson, and I'm the instructor for this course. I earned my B.S. in Applied Mathematics with a minor in Economics from West Virginia State University. While attending school, I worked for an engineering firm doing soil and rock analysis. After graduation, I moved to Texas and began work on my master's degree at Texas State University. I received an M.Ed. in Mathematics with a minor in Developmental and Adult Education. After graduation, I moved to California but the next year was offered a lecturer position at Texas State. I have given presentations at both local and national conferences on subjects such as learning theory and using technology in mathematics. Outside of academics, I spend my spare time outdoors and traveling. My wife is a British citizen, so we travel when possible back to England to visit her family. My mother owns a 300-acre working farm called Grinlow Farms, which means "Green Rolling Hills."

Contact Me

Email:mp54@txstate.edu

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Start Here

Overview

Introduction

Welcome to the Start Here module! This module is designed to provide you with essential information and resources to help you navigate successfully through this correspondence course. From accessing course materials to understanding the grading system, this module will equip you with the tools and knowledge you need to succeed. Read through this module carefully and let's dive in and get started on your path to learning and achievement!

Objectives

By the end of this module, students will be able to:

1. Access course materials to support their academic success.
2. Identify key points of information about this correspondence course.

Assignments

- Course Pacing Guide (Due within 2 weeks of your course start date)
- Start Here Module Quiz

Correspondence Course Information

As a correspondence studies student, it is your responsibility to be familiar with correspondence-related policies and services. To this end, I encourage you to review the **Correspondence Course Information page** as well as the **Correspondence Studies website**.

Orientation Video

Please view **this orientation video** to help you get started in this correspondence course. This video addresses many topics such as Bobcat Mail, navigating this course site, test requests, and more.

Online Student Resources

This webpage contains multiple resources for online students at Texas State University. Note: Some resources are only available to students who pay a student service fee.

Technical Requirements and Support

This online course requires technical skills and access to certain technology and software that face-to-face courses may not require.

- Learn about **skills and technology** you need to be successful in this course.
  Also review these **tips** and **interaction guidelines** to be a successful online learner.

Many users encounter fewer problems when they **use Chrome to access Canvas courses**.

Here's how to **get help with Canvas**:

- 24/7 **Live chat**
- 24/7 Phone support: 245.ITAC (4822)
- **Tool-specific help**
- Click Help in the left navigation of any Canvas course

Free Tutoring Resources

A variety of **free tutoring resources** are available for students enrolled in Texas State correspondence courses.

The Office of Distance and Extended Learning

FREE TUTORING

University Writing Center

The Texas State University Writing Center's online tutoring service allows Texas State correspondence, self-paced study students, to work with a writing tutor in real time in an online environment. During the online tutorial, both the student and the tutor are

Academic Integrity

Texas State Academic Honor Code

The **Texas State Academic Honor Code** applies to all Texas State students, including correspondence students. The **Honor Code** serves as an affirmation that the University demands the highest standard of integrity in all actions related to the academic community. As stated in the **Texas State Student Handbook**, **Violation of the Honor Code** includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials.

Definitions

> *As stated per **Texas State Honor Code, UPPS No. 07.10.01, Issue no. 8**.*
>
> *Please note that not all activities that constitute academic misconduct are listed in specific detail in **UPPS No. 07.10.10, Honor Code**. It is expected that students will honor the *spirit* of academic integrity and will not place themselves in the position of being charged with academic misconduct.
>
> Please cite all unoriginal material through the use of **standard bibliographical practice** explained through the **Alkek library site**.
>
> Incidents of **academic dishonesty as outlined by the University** will be reported to the administration for disciplinary action. In addition, students will receive a 0 for the assignment or assignments without the opportunity to redo the work.

Academic work signifies outcomes and products such as essays, theses, reports, exams, tests, quizzes, problems, assignments, or other projects submitted for purposes of achieving learning outcomes.

Cheating in general means, but is not limited to, engaging or attempting to engage in any of the following activities:

- Copying from another student's test paper, laboratory report, other report, computer files, data listing, programs, or from any electronic device or equipment;

- Using, during a test, materials not authorized by the person giving the test;
- Collaborating, without authorization, with another person during an examination or in preparing academic work;
- Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the content of an unadministered test;
- Substituting for another student—or permitting another person to substitute for oneself—in taking an exam or preparing academic work;
- Bribing another person to obtain an unadministered test or information about an unadministered test;
- Purchasing, or otherwise acquiring and submitting as one's own work, any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of the rough or final versions of an assignment by a professional typist;
- Submitting the same essay, thesis, report, or another project, without substantial revision or expansion of the work, in an attempt to obtain credit for work submitted in a previous course;
- Falsifying data.

Plagiarism

in general means, but is not limited to, the appropriation of another's work and the inadequately or inappropriately acknowledged incorporation of that work in one's own written, oral, visual or the performance of an original act or routine that is offered for credit.

Collusion

in general means, but is not limited to, the unauthorized collaboration with another person in preparing any work offered for credit.

Abuse of resource materials

in general means, but is not limited to, the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course content.

Please cite all unoriginal material through the use of **standard bibliographical practice** as explained on the **Alkek Library site**.

Incidents of academic dishonesty as outlined by the University will be reported to the administration for disciplinary action. In addition, students will receive a 0 for the assignment or assignments without the opportunity to redo the work.

Notice of Intellectual Property Rights

The text and images on this page and pages linked to it are protected by **copyright**. Lectures and examination questions are also protected by copyright law. You are authorized to take notes in class and to use the online.

materials provided, thereby creating derivative works from my lectures and other materials. However, this authorization extends only to making one set of notes or answers for your own personal use and no other use. You are not authorized to provide copies, notes or examination questions to anyone else, or to make any commercial use of them without prior written consent.

As stated per **Texas State Honor Code, UPPS No. 07.10.01, Issue no. 8.**

Students Requiring Accommodation Through the Office of Disability Services

The Office of Distance and Extended Learning is committed to helping students with disabilities achieve their educational goals.

A disability is not a barrier to correspondence study, and we provide reasonable accommodations to individuals in coursework and test taking.

Students who require special accommodations need to provide verification of their disability to the **Office of Disability Services**, Suite 5-5.1 LBJ Student Center, 512.245.3451 (voice/TTY).

Students should then notify the **Office of Distance and Extended Learning** at **corrstudy@txstate.edu** of any disability-related accommodation needs as soon as possible to avoid a delay in accommodations.

MATH 1319: Mathematics for Business and Economics I

Faculty Name

Mr. Shawn Peterson

Email: mp54@txstate.edu

Course Description

This course covers topics from college algebra and economics including applications of equations and inequalities, simple and compound interest and annuities. Prerequisite: Math 1311 with a grade of CR, or a grade of C or higher, ACT Mathematics score of 21 or more, SAT Mathematics score of 480 or more, Accuplacer College Mathematics score of 63 or more, Compass Algebra score of 66 or more.

Course Objectives (or Learning Outcomes)

Upon completion of this course, the student will be able to:

1. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions, to address real-world problems.
2. Solve mathematical finance problems, including the computation of interest, annuities, and amortization of loans.
3. Apply basic matrix operations, including linear programming methods, to solve application problems.
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.
5. Apply matrix skills and probability analyses to model applications to solve real-world problems.

General Education Core Curriculum (Code 020)

Mathematics Component Outcomes

Students will interpret key mathematical concepts and apply appropriate quantitative tools to everyday experience.

Core Objectives/Competencies Outcomes:

- **Critical Thinking**
  - Students will demonstrate creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- **Communication**
  - Students will effectively develop, interpret and express ideas through written, oral and visual communication.
- **Empirical and Quantitative Skills**
  - Students will manipulate and analyze numerical data or observable facts resulting in informed conclusions.

Course Materials

The textbook for this course is:
Barnett, R., Ziegler, M.R., Byleen, K.E. College Mathematics for Business, Economics, Life Sciences, and Social Sciences. 13th edition. (Pearson, 2011). ISBN: 978-0-321- 94551-8.
The text can be purchased on Amazon.

Graphing Calculator: You will be allowed to use a graphing calculator with memory cleared on the exams. You may use one of the following calculator models:

- TI-73 Explorer
- TI-80 • TI-81
- TI-82 • TI-83
- TI-83+/83+ Silver/84+/84+ Silver
- TI Nspire • TI-85 • TI-86
- TI-89/89 Titanium
- Casio - any model Casio graphing calculator

Assessments, Assignments, and Grading

Final grades are determined by performance on six assignments, a midcourse exam, and the final exam. The course grade is determined as follows:

• Assignments: 20%
• Midcourse Exam: 40%
• Final Exam: 40%

You may submit only one assignment per week, unless you receive explicit permission otherwise from me. Furthermore, you must wait to receive feedback and a grade on submitted assignments before you can submit subsequent assignments. You may not resubmit an assignment after it has been graded.

Your average score for the midcourse and final exams must be 60% or better to pass the course. Exams must be taken at an approved testing site. Refer to the Correspondence Testing webpage for information on arranging for a proctor.

The final letter grade for the course is based upon the following percentages:

A; 89.6%-100%
B: 79.6%-89.5%
C: 69.6%-79.5%
D: 59.6%-69.5%
F: 0%-59.5%

Communication Policy

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questions, or problems. You are welcome to e-mail me at mp54@txstate.edu. My policy is that during non-holiday breaks or announced away times, any email I receive between Monday morning and Friday at noon will receive a reply within 48 hours. Emails received between Friday at noon and Sunday night will receive a reply on the next business day.

Email is also the most reliable way for the instructor to reach you since all Texas State students have an email address provided by the university. I know that many people today prefer other forms of social media, but not all students have universal access to those systems. It is your responsibility to check your email messages every day for information about the course.

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Sexual Misconduct Reporting (SB 212) – Effective January 2, 2020, state law (SB 212) requires all university employees, acting in the course and scope of employment, who witness or receive information concerning an incident of sexual misconduct involving an enrolled student or employee to report all relevant information known about the incident to the university's Title IX Coordinator or Deputy Title IX coordinator. According to SB 212, employees who knowingly fail to report or knowingly file a false report shall be terminated in accordance with university policy and The Texas State University System Rules and Regulations.

Lesson 1

Overview

Introduction

This lesson covers two topics:

- **Logic, Sets, and Counting**: Logic and sets form the foundation of mathematics. We use logic to formulate precise mathematical statements and make correct deductions. We use sets to build mathematical objects such as functions presented in Chapters 1 and 2 of the textbook, and the solutions sets of systems of equations and inequalities you will study in Chapters 4, 5, and 6.
- **Probability** is the likelihood that an event will take place. It is the ratio of the number of ways an event can occur to the number of possible outcomes. When probabilities are given a value, the "chance" that an event will happen is depicted numerically from 0 (0%; will not happen) to 1 (100%; will happen).

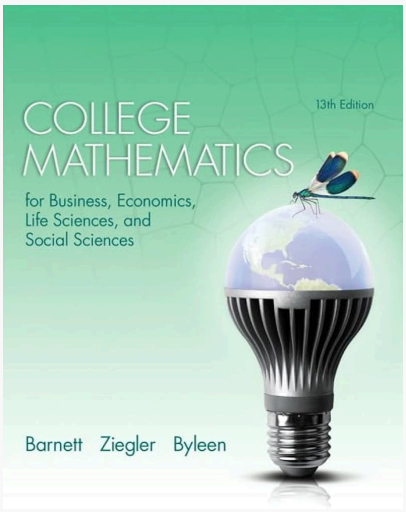
Objectives

Upon completion of this lesson, you will be able to:

1. Formulate precise mathematical statements and make correct deductions;
2. Use sets to build mathematical objects;
3. Examine logic and sets for use in determining probability;
4. Apply sets for basic counting principles;
5. Explain permutations and combinations;
6. Use counting techniques to assign probabilities to events; and
7. Examine situations in which probability is used to measure and manage risk.

Readings

You will need our course textbook to complete the required readings for this lesson.



College Mathematics for Business, Economics, Life Sciences, and Social Sciences. 13th edition. (Pearson, 2011).

Authors: Barnett, R., Ziegler, M.R., Byleen, K.E.

ISBN: 978-0-321- 94551-8.

Chapter 7: Logic, Sets, and Counting, pages 354-377

Chapter 8: Probability, pages 386-408

Assignments

When approaching module assignments, carefully read the instructions and ensure you understand the requirements. Break down the tasks into manageable steps, create a timeline, and allocate sufficient time for research, drafting, and revision if needed.

- **L1 Assignment 1**: Logic, Sets and Counting
- **L1 Assignment 2**: Probability

Lesson 1

L1 Practice: Probability

Instructions

On a separate piece of paper, work the following problems and then check your answers against those at the end of the section . Though you will not submit practice problems, work through each one to prepare for the upcoming assignment. Please note the following:

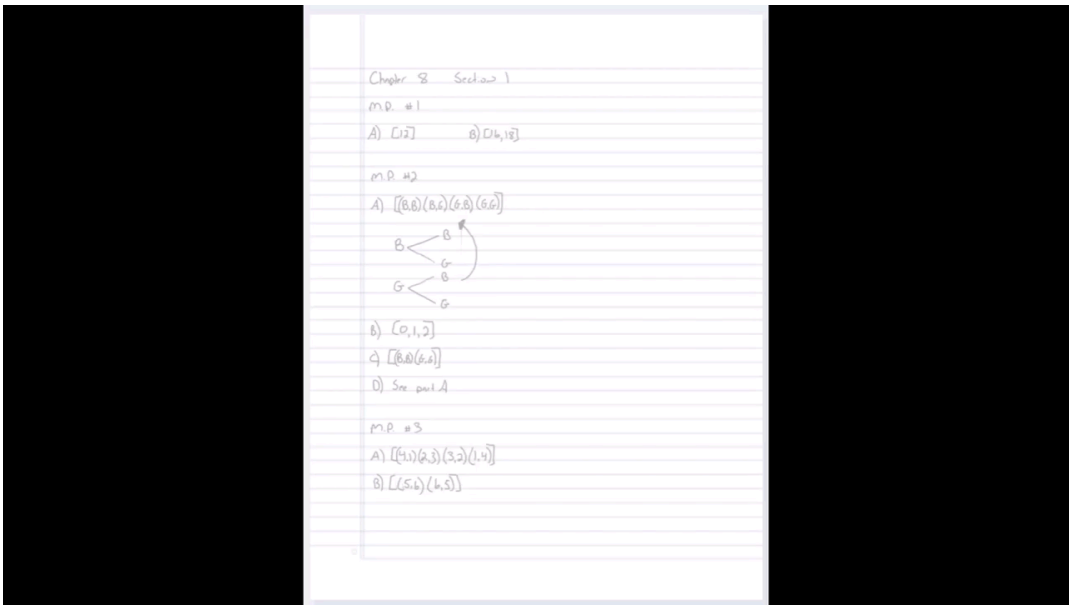
- Videos or Livescribe examples for each problem set are provided below.
- If you decide to use Livescribe pdf, You will need Acrobat Reader to view the LiveScribe examples. **Download Acrobat for free**
  Click a link below to download a Livescribe PDF to your computer. Then open the PDF in Acrobat Reader and follow the instructions that appear.

Chapter 8, Section 1 (Pages 386-395)

Chapter 8, Section 1 Livescribe Examples

- Matched Problem 1
- Matched Problem 2
- Matched Problem 3
- Matched Problem 4
- Matched Problem 5
- Matched Problem 7
- Matched Problem 8

Video

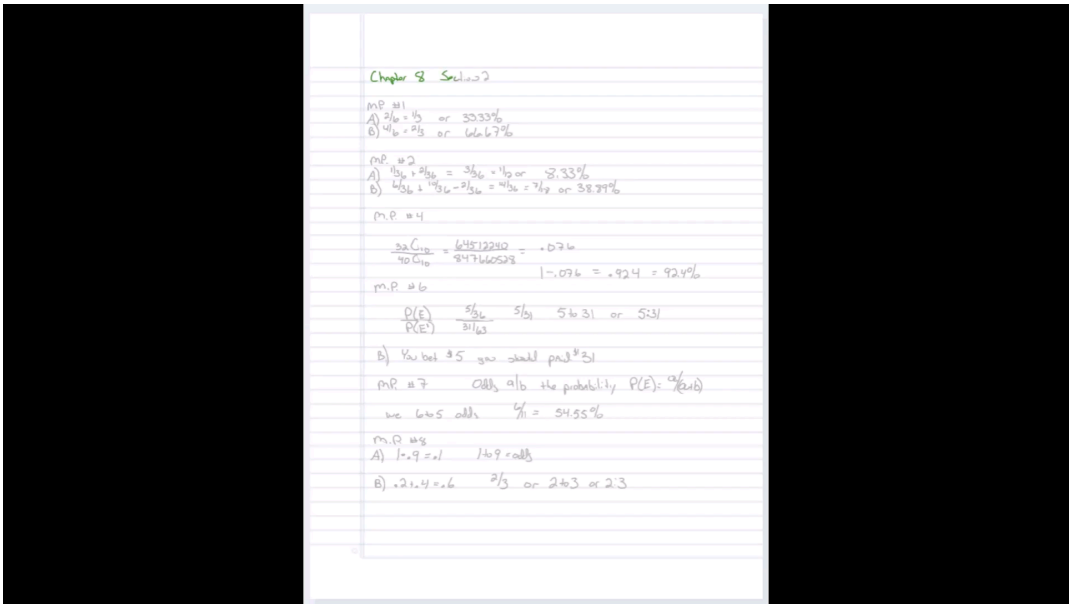


Chapter 8, Section 2 (Pages 399-408)

- Matched Problem 1
- Matched Problem 2
- Matched Problem 4
- Matched Problem 6

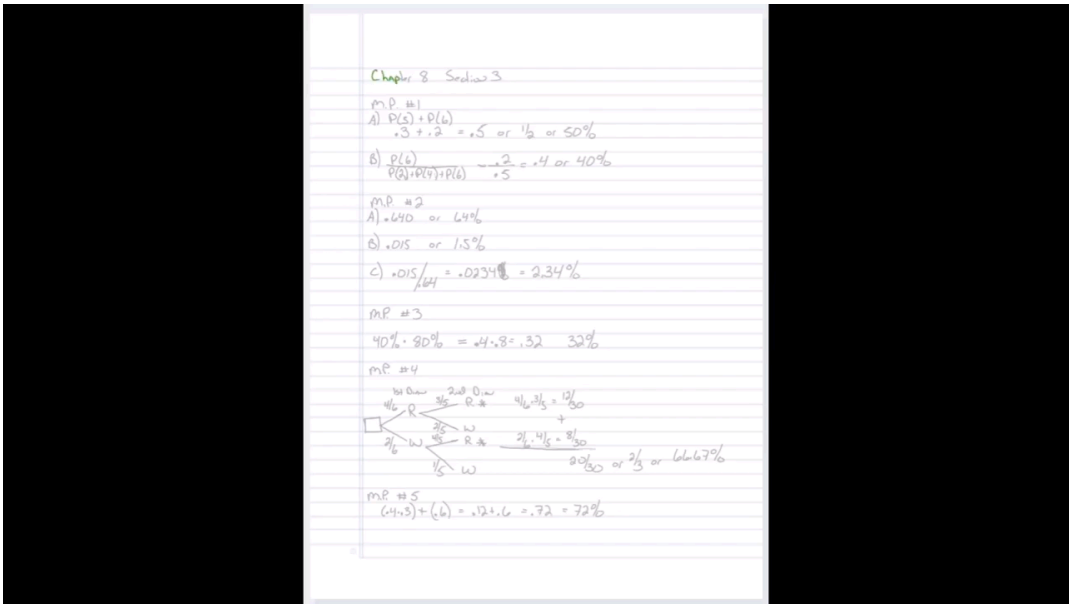
- Matched Problem 7
- Matched Problem 8

Video



Chapter 8, Section 3 (Pages 411-421)

- Matched Problem 1

- Matched Problem 2
- Matched Problem 3
- Matched Problem 4
- Matched Problem 5
- Matched Problem 7
- Matched Problem 8

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