# Ximera

6 de diciembre de 2018

# $\mathbf{\acute{I}ndice}$

## Parte I

# Tipos de actividades en Ximera

## **Examples:**

# Theorem and theorem-like environments (2.4.2, pag. 4)

Examples of the theorem environments

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#### Definición 1

Diremos que una variable aleatoria X es **continua** si, para todo número real x se tiene que

$$P(X = x) = 0.$$

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Learning outcomes:

Author(s): Bart Snapp and Rodney Austin

#### Teorema 1

Toda variable aleatoria con función de densidad, es continua (la demostración de este hecho escapa el nivel de este texto). El recíproco no es necesariamente cierto, es decir, no todas las variables continuas tienen una función de densidad. Las variables continuas con función de densidad se llaman absolutamente continuas. Todas las variables continuas con las que trabajaremos en este curso serán absolutamente continuas, y por tanto tendrán una función de densidad.

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### Proposición 1

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**Theorem 1.** This is something.

**Theorem 2** (My theorem). This is something too.

**Algorithm 1.** This is something.

**Axiom 1.** This is something.

Claim 1. This is something.

Conclusion 1. This is something.

Condition 1. This is something.

## Theorem and theorem-like environments (2.4.2, pag. 4)

Conjecture 1. This is something.

Corollary 1. This is something.

Criterion 1. This is something.

**Definition 1.** This is something.

Example 1. This is something.

**Explanation.** This is something.

Fact 1. This is something.

Formula 1. This is something.

Idea 1. This is something.

Lemma 1. This is something.

Model 1. This is something.

Notation 1. This is something.

Observation 1. This is something.

Paradox 1. This is something.

Procedure 1. This is something.

Proposition 1. This is something.

Remark 1. This is something.

Summary 1. This is something.

Template 1. This is something.

Warning 1. This is something.

## Examples:

# Problem environments (2.4.5, pag. 6)

 $Some\ problem\ environments.$ 

Online these act much like theorem-like environments.

However in the PDF, the document class option newpage will start a new page at the end of each of these. Moreoever, nested problem envionments will number as sub problems in the PDF.

Exercise 1 $Type 2: \boxed{2}$ .
Exercise 2 Type 2: 2.  Exercise 2.1 Type 2: 2.
Problema 3 Type 2: 2.
Problema 4 Type 2: 2.
Problema         4.1         Type 2: 2
Question 5 Type 2: 2.

Learning outcomes:

Question 6  $Type 2: \boxed{2}$ 

Author(s): Bart Snapp and Rodney Austin

Question	<b>6.1</b> Type 2: 2.
Exploration	7 Type 2: 2.
	8 Type 2: 2.  8.1 Type 2: 2.

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## Examples:

# Answerables (2.10.1, pag. 22)

An example of various uses of answer

xáx xáx xéx xíx xóx xúx

xáx xéx xíx xóx xúx

A math answer

Type 2: 2

Opción given (defecto false): Determines if answer is shown in handout mode. When given=true, show answer in handout mode, show answer in "given box" outside handout mode.

Type 2: 
$$\boxed{2}$$
 given

When given=false, do not show answer in handout mode, show answer outside handout mode  $\boxed{2}$ 

Opción tolerance: Used for setting numeric answer tolerance for online student input.

Type 
$$0.5 \pm 0.2$$
:  $\boxed{\frac{1}{2}}$ 

Learning outcomes:

# Multiple choice and the like (2.10.2, pag 23; 2.10.4, pag. 24)

Ejemplo de preguntas de elección múltiple

**Exercise 9** Choose the best place to work on mathematics:

## Multiple Choice:

- 1. At the library
- 2. At the cafe  $\checkmark$
- 3. In your office

Learning outcomes:

## **Examples:**

# Feedback (2.12.2, pag. 27)

Examples of feedback.

An initially hidden environment that uncovers itself at an appropriate feedback time.

By default, feedback is triggered by an attempt:

### Exercise 10 Multiple Choice:

- 1. I'm correct ✓
- 2. I'm wrong

Feedback(attempt): I show up when this problem is attempted.

Opción correct Feedback can be triggered by only correct answers:

#### Exercise 11 Multiple Choice:

- 1. I'm correct ✓
- 2. I'm wrong

Feedback(correct): I show up when this problem is answered correctly.

**Problem 12** No, really, my favorite number is y = 17. (Type x. Type something larger than 17. Type something smaller than 17. Type 17.

Feedback(attempt): You made a first attempt!

Feedback(y>17): That number is TOO BIG.

**Feedback**(y<17): That number is too small.

Feedback(correct): I have always loved the number 17.

Learning outcomes:

Author(s): Bart Snapp and Jim Fowler

# Parte II

# Crear contenidos con Ximera