

## CALCULATE INTERESTS

### Understand the True Cost of Borrowing

Nowadays, due to inflation, prices are rising; as a result, the cost of a home, for example, could be prohibitive without applying for a loan, and there is no loan that is given without interest. At first glance the amount expressed by the percentage indicating the interest could seem small and the proposal appealing. But only by doing some math will we see how even the small numbers, small variations in percentage, could make a big difference in terms of money to be added at the end of the loan period.

Together we will understand how to calculate the amount to be added to the loan in order to be aware of it and, moreover, to be able to correctly evaluate different proposals.

#### Overview “CALCULATE INTERESTS”

#### How to calculate interest based on the rate applied

**Context**  
Everyday life,  
Finance

**Cognitive processes**  
Managing situations  
Analyzing situations  
Processing informations

#### Target group (incl. necessary prior skills and competences)

Adults and young adults;  
Learners are familiar with the percentage calculation, they are people open to economic issues that affect any citizen these days.

**Dispositions**  
Flexibility  
Curiosity  
Collaboration

#### Content

Multiplications  
Divisions  
Addition

#### Outcomes and results

Learners will understand the effect of the amount of the interest rate and they will be able to make conscious decisions about it.



**Main information**

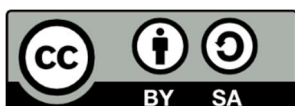
<b>Content</b>	Natural numbers; decimal numbers; multiplication; division; addition.
<b>Target group</b>	Adults and young adults; Learners are familiar with the percentage calculation, they are people open to economic issues that affect any citizen these days.
<b>Learning intention</b>	<ul style="list-style-type: none"> <li>- Numeracy for personal and private purposes</li> <li>- Numeracy to understand society</li> </ul>
<b>Duration</b>	2 UE
<b>Material and resources</b>	Slides (see appendix) Contracts (real situations) calculator
<b>Group size</b>	Range from 4 to 16 learners
<b>Problem statement</b>	The request for a loan always involves the additional return of a fee, called interest. At the time of the choice of the loan agreement you are made aware of what will be the percentage relative to the interest. Often these numbers are very low and we can think that as a result the relative amount of money is so. In fact, doing some simple calculations it is possible to see how even small numbers affect a lot on the total. In this way it will be possible to make a correct forecast of the total amount to be returned at the end of the agreed period and also to be able to evaluate different proposals, so as to find the most convenient.
<b>Working questions</b>	<ul style="list-style-type: none"> <li>- What is a loan? What is an interest?</li> <li>- What do you expect to be the amount to be returned in different contractual situations?</li> <li>- What is the most convenient situations?</li> </ul>
<b>Learning outcomes and results</b>	Learners will understand the effect of the amount of the interest rate and they will be able to make conscious decisions about it.



### Working plan

Time (lessons)	Description of content/activities	Material	Methodical and didactic information <sup>1</sup>
30' +	<p><b><u>1. Discover</u></b></p> <p>This activity is conducted initially simply by guiding the discussion with some questions, also to evaluate students' knowledge related to the topic. As a result, the teacher will understand whether or not it is necessary to deepen the concept of loan and interest.</p>	Slides	<p>Discussion</p> <p>[if need be explicit teaching]</p>
60'	<p><b><u>2. Calculate the interest</u></b></p> <p>Learners are initially asked how they would rate the interest of some contracts. A brief discussion of the proposed ideas follows and finally, if necessary, the teacher shows, explains and makes understandable the mathematical formula to calculate exactly the value of the interest. In closing different situations are submitted to learners and they are asked to predict and calculate the final total of interest to be paid.</p>	Real situations or contracts; calculator	<p>Discussion</p> <p>Collaborative learning</p> <p>Hand on learning</p> <p>Explicit teaching</p>
45'	<p><b><u>3. Evaluate different proposal</u></b></p> <p>The teacher delivers different loan proposals and asks them to evaluate the most convenient, if any, and to discuss together what are the criteria used to make a careful assessment of the matter.</p>	Real situations or contracts; Calculator	<p>Collaborative learning (pairs)</p> <p>Hands on learning</p>

<sup>1</sup> for description and explanation of kinds of tasks, HITs and other background information please consult the teacher's/user's guide

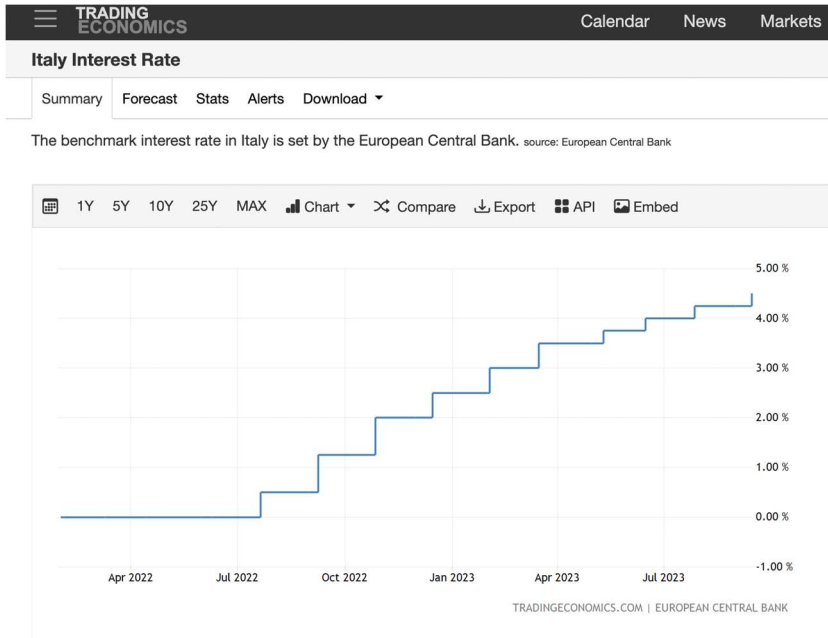


30' +	<p><b><u>4. Discussion</u></b></p> <p>The working groups share the assessments and considerations that emerged during <b>phase 3</b>. a phase of exchange of views follows.</p>		Discussion Feedback
-------	---	--	------------------------



## Appendix

### 1. Discover

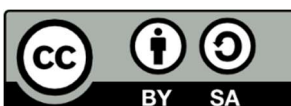


TRADINGECONOMICS.COM | EUROPEAN CENTRAL BANK

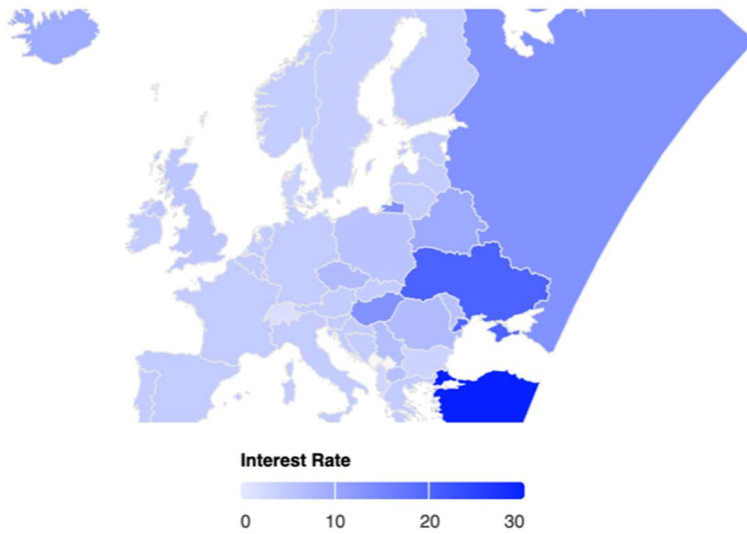
Related	Last	Previous	Unit	Reference
Interest Rate	4.50	4.25	percent	Sep 2023
+				

Italy Interest Rate						
Italy is a member of the European Union which has adopted the euro. Italy's benchmark interest rate is set by the European Central Bank. The official designation for the rate is main refinancing operation.						
Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
4.50	4.25	4.75	0.00	1998 - 2023	percent	Daily

[www.tradingeconomics.com](http://www.tradingeconomics.com)



This work is licensed under CC BY-SA 4.0. To view a copy of this license, visit <https://creativecommons.org/licenses/by-sa/4.0/>



[www.tradingeconomics.com](http://www.tradingeconomics.com)

Country	Last	Previous	Reference	Unit
Switzerland	1.75	1.75	Sep/23	%
Albania	3	3	Oct/23	%
Bulgaria	3.29	3.12	Aug/23	%
Denmark	3.6	3.35	Sep/23	%
Sweden	4	3.75	Sep/23	%
Norway	4.25	4	Sep/23	%
Bosnia and Herzegovina	4.36	4.45	Aug/23	%
Euro Area	4.5	4.25	Sep/23	%
United Kingdom	5.25	5.25	Sep/23	%
Poland	5.75	6	Oct/23	%
Moldova	6	6	Sep/23	%
Macedonia	6.3	6.15	Sep/23	%
Serbia	6.5	6.5	Oct/23	%
Czech Republic	7	7	Sep/23	%
Romania	7	7	Oct/23	%
Iceland	9.25	9.25	Oct/23	%
Belarus	9.5	9.5	Sep/23	%
Hungary	13	14	Sep/23	%
Russia	13	12	Sep/23	%
Ukraine	20	22	Sep/23	%
Turkey	30	25	Sep/23	%



## Le migliori offerte

**Mutuo di 120.000 euro per una casa da 150.000**  
Aggiornamento al 17 maggio  
Fonte: elaborazione su dati mutuiOnline.it

Tasso fisso 20 anni			Tasso fisso 30 anni		
	Rata	Tasso effettivo		Rata	Tasso effettivo
WeBank.it	632,96	2,55%	WeBank.it	480,41	2,78%
Bnl	632,96	2,68%	Bper	476,02	2,68%
Bper	636,47	2,70%	B.co di Sardegna	474,15	2,70%
Intesa Sanpaolo	632,96	2,73%	Bnl	477,27	2,73%
B.co di Sardegna	635,88	2,75%	Intesa Sanpaolo	480,41	2,83%

Tasso variabile 20 anni			Tasso variabile 30 anni		
	Rata	Tasso effettivo		Rata	Tasso effettivo
Bnl	532,82	0,84%	Banca Carige	372,34	0,89%
WeBank.it	540,18	0,84%	Banco Desio	372,34	0,93%
Banco Desio	532,82	0,87%	Bnl	374,50	0,94%
Banca Carige	535,96	0,88%	Unicredit	377,21	0,94%
Banco Bpm	538,59	0,96%	Credem	374,50	1,02%

[www.corriere.it](http://www.corriere.it)

Mese	Tasso (TAN)	Rata mensile	Aumento rata rispetto a gennaio 2022
Gennaio 22	0,67%	€ 456	-
Giugno 22	0,90%	€ 469	€ 13
Ottobre 22	2,35%	€ 556	€ 100
Dicembre 22	3,07%	€ 602	€ 146
Gennaio 23	3,33%	€ 619	€ 163
Giugno 23 – Previsioni Eures sugli Euribor	4,75%	€ 718	€ 262

## SIMULAZIONI SU MUTUO DI 126.000€ DA RESTITUIRE IN 25 ANNI

Variazione offerta di mutui a tasso fisso per i nuovi mutuatari

Mese	TAN	Rata mensile	Aumento rata rispetto a gennaio 2022
Gennaio 2022	1,05%	€ 477	-
Gennaio 2023	3,26%	€ 614	€ 137

[www.skytg.it](http://www.skytg.it)

Fonte: Facile.it



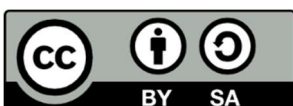
This work is licensed under CC BY-SA 4.0. To view a copy of this license, visit <https://creativecommons.org/licenses/by-sa/4.0/>

**2-3: calculate and evaluate**

Each country should search online for loan proposals from its own country.

For example:

<https://www.mutuonline.it/news/i-migliori-mutui-prima-casa-a-maggio-2023-00037638.asp#:~:text=Mutuo%20a%20Tasso%20Fisso%20Cr%C3%A9dit,%E2%82%AC%20562%2C57%20al%20mese.>





This material was produced in the Erasmusplus project **Numeracy in Practice**, projectnumber 2021-1-NL01-KA220-ADU-000 026 292. In this project, 11 partners in 11 countries worked together in designing, evaluating and improving the materials. All materials can be found on the website ([www.cenf.eu](http://www.cenf.eu)).



UNIVERSITAT DE  
BARCELONA



Asturia vzw



D!SORA