



Instructions and definitions

Welcome to the Financial Literacy round of the IEOx WinterChallenge!

You have to answer 25 multiple choice questions in 60 minutes.

By clicking on the button in the top right corner of your screen, you can open a timer to see how much time you have left.

Keep in mind that you will get negative points for wrong answers, so if you are not sure you know the right answer, choose:

"I will not answer this question".

Suppose that comma (",") indicates a decimal point.

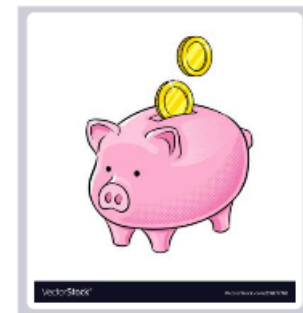
Click on images and zoom in, using "+" where needed.

Do not forget to submit your answers and fill in your full name and the PERSONAL code we sent you in the last e-mail (as "student's ID"), properly. It is crucial to identify your results!

Wishing you success! We hope you enjoy the experience! :)

QUESTION 1 ☆

George deposits \$5.000 in a bank account. If reserve ratio is 20%, what is the maximum amount the bank may lend based on this deposit?



- \$1.000
- \$4.000
- \$20.000
- \$25.000

QUESTION 2 ☆

You earn \$4,000 per month. You spend \$2,800 on living expenses, save \$800, and pay \$400 towards debt (\$200 interest payment, \$200 principal repayment). Your net worth has increased by:

- 10% of your income.
- 20% of your income.
- 25% of your income.
- 30% of your income.

QUESTION 3 ☆

Mary wants to save \$16,550 in the following 3 years. How much should she save annually, in the end of each year, assuming a 10% interest rate?

- less than \$4,250
- \$4,500
- \$5,000
- more than \$5,500

QUESTION 4 ☆

Which of the following is a SMART financial goal?

- Save \$200,000 to buy happiness.
- Save \$5,000 in 12 months for a vacation.
- Earn more income next year.
- Save enough for emergencies.

QUESTION 5 ☆

Which of the following is a primary function of the central bank?

- Providing loans to individuals.
- Controlling the money supply.
- Setting individual tax rates.
- Setting fiscal policy.

QUESTION 6 ☆

What is the primary role of commercial banks in the economy?

- Printing money.
- Setting the risk free interest rate.
- Facilitating savings, credit, and payments.
- Controlling inflation.

QUESTION 7 ☆

If you deposit \$5.000 in a savings account that offers a 3% annual interest rate compounded annually, how much (approximately) will you have after 2 years?

- \$5.150
- \$5.300
- \$5.305
- \$5.609

QUESTION 8 ☆

Which of the following strategies is most effective for building an emergency fund?

- Investing in stocks.
- Setting up automatic transfers to a savings account.
- Using a credit card for emergencies.
- Keeping cash at home.

QUESTION 9 ☆

If a credit card has an annual interest rate (APR) of 18%, what is the monthly interest rate?

- 1%
- 1,5%
- 1,8%
- 2%

QUESTION 10 ☆

Which of the following factors has the greatest impact on your credit score?

- Length of credit history.
- Payment history.
- Types of credit used.
- Number of recent credit inquiries.

QUESTION 11 ☆

If a borrower repays only the minimum amount on their credit card each month, what is the likely consequence?

- Lower credit utilization ratio.
- Higher interest charges over time.
- Improved credit score.
- Faster repayment of debt.

QUESTION 12 ☆

What is the primary purpose of diversification in an investment portfolio?

- Maximize expected returns.
- Reduce risk.
- Increase liquidity.
- Minimize tax liability.

QUESTION 13 ☆

If an investor buys a bond with a 5% annual coupon rate and a face value of \$1,000, how much interest will they receive for the second year?

- \$5
- \$50
- \$55
- \$100

QUESTION 14 ☆

Which of the following describes the relationship between risk and return?

- Higher risk is always better.
- Lower risk guarantees higher return.
- Higher risk is typically associated with the potential for higher returns.
- Risk and return are unrelated.

QUESTION 15 ☆

Which of the following best describes a premium in an insurance contract?

- The amount paid by the insurer to the policyholder.
- The amount paid regularly by the policyholder to maintain coverage.
- The cost of damages covered by the insurance.
- The payout from the insurance company in case of a claim.

QUESTION 16 ☆

You are considering an investment of \$1.000 in one of two alternative projects, A and B. Your required discount rate is 5%. Based on the cashflows of each project, which of the following statements is correct?

$r=5\%$	A	B
0	-1000	-1000
1	600	300
2	700	400
3		600

- Neither investment has positive net present value.
- Both investments are eligible, A is preferable.
- Both investments are eligible, B is preferable.
- Both investments are eligible, we are indifferent between them.

QUESTION 17 ☆

Which of the following is characteristic of a Ponzi scheme?

- Investment returns are generated through legitimate business activities.
- Early investors are paid with funds from new investors.
- Investors are fully aware of where their money is invested.
- Returns are consistent with market performance.

QUESTION 18 ☆

Which of the following best describes equity-based crowdfunding?

- Contributors receive products or services in return for their contributions.
- Contributors receive a share of ownership in the company.
- Contributions are made as donations with no expectation of return.
- Contributors lend money expecting repayment with interest.

QUESTION 19 ☆

Betty invests \$15,000 in an asset. There is a 50% probability that the asset will generate a cashflow of \$15,000 at the end of Year 1. If the Year 1 cashflow occurs, there is a further 50% probability of receiving an additional \$15,000 cashflow at the end of Year 2. Assuming a 5% discount rate, what is the expected return of the asset today?

- 50%
- 30%
- 0%
- 30%

QUESTION 20 ☆

Which of the following financial instruments is typically considered the most volatile?

- Government bonds.
- Shares to a state owned enterprise.
- Mutual funds.
- Cryptocurrencies.

QUESTION 21 ☆

A company plans to invest €250.000 and expects to receive annual cash flows of €100.000 for the next three years. What is the discount rate required for the project to break even (Net Present Value = 0)?

- $r \approx 0\%$
- $r \approx 9,5\%$
- $r \approx 10\%$
- $r \approx 16,7\%$

QUESTION 22 ☆

A perpetuity is a stream of payments over certain periods that goes on forever. It's like a never ending annuity. If the holder of a perpetuity receives \$175.000 per year and the discount rate is 4%. The value of the perpetuity is:

- \$43.750
- \$700.000
- \$4.375.000
- Since it goes on forever the present value must be infinite.

QUESTION 23 ☆

Laszlo earns an income of \$50,000 and pays \$7,000 in taxes. The marginal tax rate for income higher than \$30,000 is:

- $x=15\%$
- $x=20\%$
- $x=27,5\%$
- Impossible to calculate.

QUESTION 24 ☆

Moneyland uses Money and Cashtan uses Cash, as their currencies.

Currently, spot exchange rate is 1,25 Money = 1 Cash.

The three-month forward exchange rate is 1,30 Money = 1 Cash.

The currency market is assumed perfect, and the International Fisher Effect holds.

Which of the following statements is true?

- It is risk free to buy Cash today and sell it in the forward market.
- Nominal interest rate is higher in Cashland.
- Real interest rate is higher in Cashland.
- Cash is expected to appreciate.

QUESTION 25 ☆

A project has average estimated cash flows of \$5.000 per year with an initial investment of \$10.000. Depreciation is straight-line with no residual value and the project has a three-year life span. The company has set a Required Rate of Return (RRR) equal to x%.

The project would be accepted for:

- x=10, but rejected for x=20.
- x=20, but rejected for x=10.
- both x=10 and x=20.
- neither x=10 nor x=20.