

# LESSON PLAN

*The Rule of 72*

- IT'S A -  
**MONEY  
THING®**

## INCLUDED IN THIS PACKAGE

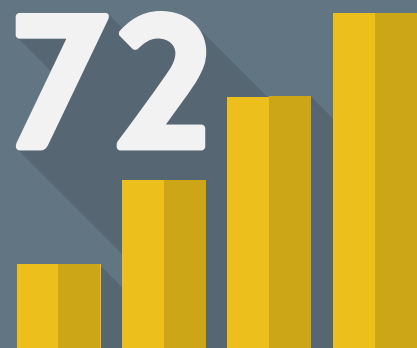
- **LESSON PLAN** (2 pages)
- **ACTIVITY** (2 pages)
- **QUIZ** (1 page)
- **ACTIVITY ANSWER KEY** (2 pages)
- **QUIZ ANSWER KEY** (1 page)

## COLLECT FROM YOUR LIBRARY

- **VIDEO 22** (*The Rule of 72*)
- **HANDOUT 22** (*The Rule of 72*)
- **PRESENTATION 22** (*The Rule of 72*)

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# LESSON PLAN

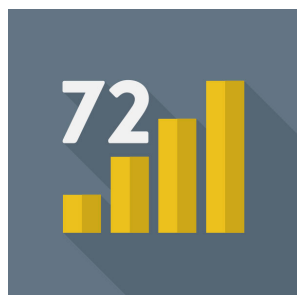
## The Rule of 72

GRADES

10 to 12

TIME

45 minutes



### OVERVIEW

This lesson introduces students to the Rule of 72, a quick estimation tool used to calculate the time it takes for an investment to double at a fixed annual interest rate. Students will practice applying the rule, analyze its accuracy and explore its applications and limitations.

### GOALS

- Introduce students to the Rule of 72 and its purpose in financial planning
- Provide students with the opportunity to practice applying the Rule of 72
- Familiarize students with factors impacting the rule's accuracy

### OBJECTIVES

- Define the Rule of 72 and its formula
- Apply the Rule of 72 to solve practical problems related to investment and debt
- Analyze the accuracy of the Rule of 72 by comparing estimates to precise calculations
- Identify macroeconomic factors that influence the rule's reliability

### ASSESSMENT

Use the activity in this lesson plan to assess students' grasp of the topic. An optional quiz is also provided (the quiz is not factored into the lesson's 45-minute runtime).

***Did you know?** This lesson plan explores concepts from Standard 3 (Saving) from the Council for Economic Education's National Standards for Personal Financial Education.*

### MATERIALS

- ☐ **VIDEO 22**—*The Rule of 72*
- ☐ **HANDOUT 22**—*The Rule of 72*
- ☐ **PRESENTATION 22**—*The Rule of 72*
- ☐ **ACTIVITY**—*Double It Up! Worksheet and Answer Key*
- ☐ **QUIZ**—*The Rule of 72 and Answer Key*

### PREPARATION

- Gather digital materials (video and presentation)
- Print one copy of the **ACTIVITY** for each pair of students (or for each student, if working individually)
- (Optional) Provide calculators for class use if desired
- Print **HANDOUT 22** for each student
- (Optional) Print **QUIZ** (The Rule of 72) for each student

## The Rule of 72

**5 minutes** Introduce topic and show **VIDEO 22** (*The Rule of 72*)

**20 minutes** Facilitate the **ACTIVITY**

**10 minutes** Discuss **ACTIVITY** insights

**(Optional)** Assessment: **QUIZ**  
(*The Rule of 72*)

1. Begin by asking students the following:
  - Why do people save or invest instead of keeping money in cash?
  - How long do you think it takes for money to double in an investment?
  - Why might it be useful to know how long it takes for your money to double?
2. Introduce the topic: “Today, we’ll learn the Rule of 72, a quick way to estimate how long it takes for money to double.”
3. Show **VIDEO 22**
4. Review slides 1–9 of **PRESENTATION 22** to define the Rule of 72 and its formula
5. Facilitate the **ACTIVITY**
  - Pair students and distribute the worksheets; provide calculators if you choose to use them
  - Allow 7–8 minutes for students to complete Page 1 and write their answers in the table on Page 2
  - Review answers and share the exact doubling times (using the Answer Key); have students record these values in the table

- Allow a few more minutes for students to calculate the differences between their estimates and the exact times
  - Ask students to review the table and reflect on patterns in the accuracy of the Rule of 72 before moving to the discussion
6. Use prompts from the **ACTIVITY** Answer Key to discuss the Rule of 72's accuracy, applications and limitations
7. Wrap up by sharing the following:
  - By understanding its strengths and limitations, you can use the Rule of 72 to compare savings or investment options and make smarter financial decisions as you plan for your future—whether it's saving for a car, college or other goals
8. Distribute **HANDOUT 22** for students to take home
9. (Optional) Distribute **QUIZ** for individual assessment, or answer the questions together as a class; decide whether or not students can reference their notes/handouts during the quiz

## NOTES

[illegible]



# ACTIVITY

## The Rule of 72

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### DOUBLE IT UP!

**Directions:** Use the Rule of 72 to calculate the approximate doubling time for each scenario below. Once you have completed the problems, transfer your answers to the **Rule of 72 Estimate (Years)** column in the table on Page 2.

#### INVESTMENT GROWTH

At 8% annual interest, how long will it take for \$500 to double?

#### SAVINGS ACCOUNT

Your savings account earns 2% annual interest. Estimate how long it will take for your balance to double.

#### LOW-RISK BOND

A government bond pays 4% annual interest. How long will it take for your investment to double?

#### HIGH-YIELD INVESTMENT

A high-risk fund offers 12% annual interest. How quickly will your money double?

#### CREDIT CARD DEBT

Your credit card has an interest rate of 24% annually. Estimate how long it will take for your debt to double if unpaid.

#### INFLATION IMPACT

If inflation is steady at 3% per year, how many years will it take for prices to double?



*Put your brain to the test! The Rule of 72 is designed to be quick and easy. Take it a step further by solving these problems in your head—no calculator required!*

$$72 \div \begin{matrix} \text{ANNUAL} \\ \text{INTEREST} \\ \text{RATE} \\ \downarrow \\ \mathbf{R} \end{matrix} = \begin{matrix} \text{YEARS TO} \\ \text{DOUBLE} \\ \downarrow \\ \mathbf{T} \end{matrix}$$



# ACTIVITY

## *The Rule of 72*

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### DOUBLE IT UP!

Directions: Use your answers from Page 1 to complete the **Rule of 72 Estimate (Years)** column in the table below. Your instructor will provide the values for **Exact Doubling Time (Years)** later. Once the exact times are provided, calculate the difference between the estimates and the exact doubling times, and fill in the **Difference (Years)** column.

Interest Rate (%)	Rule of 72 Estimate (Years)	Exact Doubling Time (Years)	Difference (Years)
1%	72	69.66	-2.34
2%			
3%			
4%			
6%	12	11.90	-0.10
8%			
10%	7.2	7.27	+0.07
12%			
15%			
20%	3.6	3.80	+0.20
24%			
30%	2.4	2.64	+0.24



# QUIZ

## The Rule of 72

NAME: \_\_\_\_\_

TOTAL  
/ 7 pts

### MULTIPLE CHOICE

Directions: CIRCLE the best possible answer for each question.

/4 pts

1. Why is the Rule of 72 useful in personal finance?
  - a. It helps estimate the time it takes for investments to double
  - b. It helps compare investments with different interest rates
  - c. It helps in setting savings and retirement goals
  - d. All of the above
2. You want to double your savings in 10 years. What interest rate should you look for using the Rule of 72?
  - a. 3%
  - b. 7.2%
  - c. 8%
  - d. 10%
3. The Rule of 72 is most accurate when interest rates are:
  - a. Below 5%
  - b. Between 6% and 10%
  - c. Above 15%
  - d. It is equally accurate at all rates
4. If your investment earns 3% annually, how many years will it take to double using the Rule of 72?
  - a. 3 years
  - b. 6 years
  - c. 24 years
  - d. 72 years

### TRUE OR FALSE

Directions: CIRCLE either true or false.

/3 pts

5. TRUE or FALSE      The formula for the Rule of 72 is:  
 $72 \div (\text{Annual Interest Rate}) = \text{Years to Double}$
6. TRUE or FALSE      The Rule of 72 only works for simple interest rates.
7. TRUE or FALSE      The Rule of 72 can be used to estimate the effects of inflation on purchasing power.

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# ACTIVITY ANSWER KEY

## *The Rule of 72*

### DOUBLE IT UP!

**Directions:** This answer key is divided into sections to guide you through each part of the activity. For each section, follow the instructions provided to review the answers and discuss findings.

### PAGE 1 ANSWER KEY

**Begin by reviewing the answers to the problems on Page 1 of the activity. Ensure students have transferred their Rule of 72 estimates into the table on Page 2.**

- INVESTMENT GROWTH: **9 years**
- LOW-RISK BOND: **18 years**
- CREDIT CARD DEBT: **3 years**
- SAVINGS ACCOUNT: **36 years**
- HIGH-YIELD INVESTMENT: **6 years**
- INFLATION IMPACT: **24 years**

### PAGE 2 ANSWER KEY

**Share the exact doubling times from the completed table below. Allow students a few minutes to calculate the differences between their Rule of 72 estimates and the exact doubling times.**

Interest Rate (%)	Rule of 72 Estimate (Years)	Exact Doubling Time (Years)	Difference (Years)
1%	72	69.66	-2.34
2%	36	35.00	-1.00
3%	24	23.45	-0.55
4%	18	17.67	-0.33
6%	12	11.90	-0.10
8%	9	9.01	+0.01
10%	7.2	7.27	+0.07
12%	6	6.12	+0.12
15%	4.8	4.96	+0.16
20%	3.6	3.80	+0.20
24%	3	3.22	+0.22
30%	2.4	2.64	+0.24



# ACTIVITY ANSWER KEY

## *The Rule of 72*

### DOUBLE IT UP!

### REFLECTION QUESTIONS

**Give students time to review their work and to consider the questions below.**

- Now that you've completed the table, how accurate is the Rule of 72 across different interest rates? Are there certain rates where it works better or worse?
- What types of scenarios can the Rule of 72 be applied to besides investment growth?

### DISCUSSION PROMPTS

**Use the discussion prompts to guide a deeper exploration of the Rule of 72, its accuracy, limitations and applications. Encourage participation and relate the discussion to practical examples.**

#### **Accuracy:**

- At what interest rates is the Rule of 72 most accurate? *(6% to 10%; in this range, it aligns closely with the actual doubling time derived from the compound interest formula)*
- How does its accuracy change for very low or very high interest rates? *(A little less accurate—over for very low rates and under for very high rates)*

#### **Comparing Scenarios:**

- What scenarios can the Rule of 72 be applied to? *(Investment growth, debt, inflation, population growth)*
- What do these scenarios have in common that allows the Rule of 72 to work across all of them? *(The concept of compounding or exponential growth)*

#### **Use:**

- What makes the Rule of 72 useful even though it's not perfectly accurate? *(Quick way to approximate how long it will take for an investment to double at a given interest rate)*

#### **Macroeconomic Factors:**

- What factors could impact the accuracy of the Rule of 72? *(Fluctuating interest rates, changes in inflation, major economic events like recessions or booms)*

#### **Real-life Connections:**

- In what real-life situations might someone need to estimate doubling times for their money? *(Comparing investments, calculating savings, calculating retirement goals)*
- Imagine you're saving money from a part-time job to buy a car or pay for college. How could the Rule of 72 help you plan? *(Calculate the time to save for a down payment)*





# QUIZ ANSWER KEY

## *The Rule of 72*

### MULTIPLE CHOICE

Directions: CIRCLE the best possible answer for each question.

/4 pts

1. Why is the Rule of 72 useful in personal finance?
  - a. It helps estimate the time it takes for investments to double
  - b. It helps compare investments with different interest rates
  - c. It helps in setting savings and retirement goals
  - ☒ d. All of the above
2. You want to double your savings in 10 years. What interest rate should you look for using the Rule of 72?
  - a. 3%
  - ☒ b. 7.2%
  - c. 8%
  - d. 10%
3. The Rule of 72 is most accurate when interest rates are:
  - a. Below 5%
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  - c. Above 15%
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4. If your investment earns 3% annually, how many years will it take to double using the Rule of 72?
  - a. 3 years
  - b. 6 years
  - ☒ c. 24 years
  - d. 72 years

### TRUE OR FALSE

Directions: CIRCLE either true or false.

/3 pts

5. ☒ TRUE or FALSE      The formula for the Rule of 72 is:  
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