**The Rule of 72 Notes**

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**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions: As you listen to the lecture and watch the PowerPoint presentation on the Rule of 72, please complete the following notes (34 points total):**

**State the Rule of 72:**

**What is the formula for the Rule of 72:**

**Who is credited for discovering the Rule of 72:**

**The Rule of 72 will determine the following:**

1. **How many years it will take an investment to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at a given interest rate using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
2. **How long it will take \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to double if \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
3. **The interest rate an investment must earn to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
4. **How many times money (or \_\_\_\_\_\_\_\_\_\_\_\_\_\_) will double in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Things to know about the Rule of 72:**

1. **It is only an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
2. **The interest rate must \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
3. **The equation does not allow for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to be made to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
4. **Interest earned is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
5. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are not included within the equation.**

**Write down the formula to determine how often an individual’s investment in the stock market has doubled since 1926 (average return of 11%):**

**Rule of 72 Calculations**

**Directions: Use the Rule of 72 to answer the following questions (Questions 1-9 are worth 5 points each, Question 10 is worth 35 points, for a total of 80 points):**

1. **How long will it take the following investments to double? Round to two decimal places.**

|  |  |  |
| --- | --- | --- |
| **Investment** | **Interest Rate** | **Years to Double** |
| Money Market Mutual Fund | 3.1% | 23.2 |
| Small Company Stock | 12.6% | 5.7 |
| 3-year Certificate of Deposit | 2.8% | 25.7 |
| 5-year Certificate of Deposit | 5.1% | 14.1 |
| Large Company Stock | 11.3% | 6.4 |
| Government Stock | 5.3% | 13.6 |
| Treasury Bills | 3.8% | 18.9 |

1. **Jenny has a $3,000 balance on her credit card with an 18% interest rate. If she makes no payments on her card and no late fees were charged, how long will it take for her debt to double, if not payments are made. 72 / 18 = 4 years**
2. **What if Jenny’s APR was 22% and she makes no payments on her card and no late fees were charged? How long would it take her debt to double? 72 / 22 = 3.3 years**
3. **Tanner has invested $500 for college. What rate of return must Tanner earn for his investment to double in four years? 72 / 4 = 18%**
4. **Kari would like to make a down payment on a house. She currently has $7,000. What rate of return must Kari receive for her investment to double in seven years? 72 / 7 = 10.28%**
5. **Mark has invested $300 at age 16 into a money market account earning 6%. How many times will Mark’s investment double before age 52? What would his investment be worth? Fill out the following table: 72 / 6% = 12 years**

|  |  |
| --- | --- |
| **Age** | **Investment Value** |
| 16 | $300 |
|  **28** |  **$600** |
|  **40** |  **$1,200** |
|  **52** |  **$2,400** |
|  |  |
|  |  |

1. **What would Mark’s investment be worth at age 52 if he has waited 12 years (age 28) to invest?**

 **$1,200**

1. **Jackie’s parent invested $3,000 into a common stock earning 10% annually when she was born. How many times will Jackie’s investment double before age 36? What will her investment be worth? Fill out the following table: 72 / 10 = 7.2 years.**

|  |  |
| --- | --- |
| **Age** | **Investment Value** |
| 0 | $3,000 |
|  **7.2** |  **6,000** |
|  **14.4** |  **12,000** |
|  **21.6** |  **24,000** |
|  **28.8** |  **48,000** |
|  **36.0** |  **96,000** |
|  |  |

1. **What would Jackie’s investment be worth at age 36 if her parents had waited to invest until she was age 7? $48,000**
2. **Intrapersonal Reflection Essay Response – State a reason why it’s important to begin your investments and savings early, and explain what you plan to save for and why?**