

SAVINGS ADD UP

SIMPLE INTEREST – *interest paid only on the initial deposit* $0.05 \times 1000 = 50$

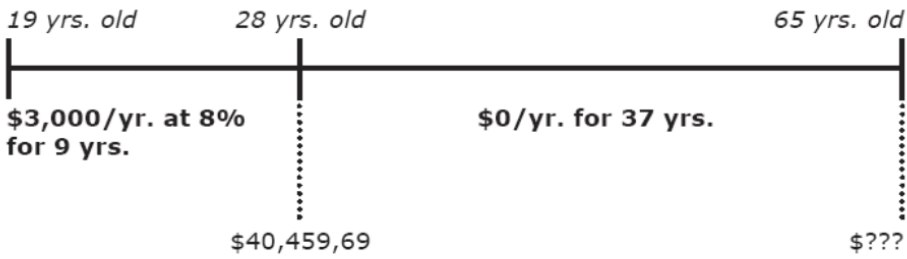
- E.g.: \$1000 at 5% simple interest earns \$50 every year $\div 100$
 - + \$50.00 in the second year (total: \$1100.00)
 - + \$50.00 in the third year (total: \$1150.00)
 - + \$50.00 in the fourth year (total: \$1200.00)
 - + etc.

COMPOUND INTEREST – *interest paid on the initial deposit and on any interest that has been earned*

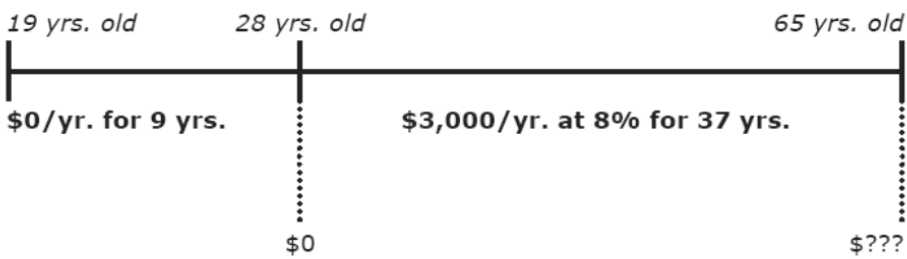
- E.g.: \$1000 at 5% compound interest earns \$50 in the first year $1050 \times 0.05 = 52.50$
 - + \$52.50 in the second year (total: \$1102.50)
 - + \$55.13 in the third year (total: \$1157.63) $\times 0.05 =$
 - + \$57.88 in the fourth year (total: \$1215.60)
 - + etc.

SAVER AND SPENDER

JOE SAVER



JIM SPENDER



RULE OF 72**Roughly how long will it take to double my money?**

Using compound interest:

$72 \div \text{interest rate} = \text{number of years}$
to double savings

E.g.: $72 \div 5\% = 14.4$ years to double

$72 \div \text{years} = \text{interest rate needed}$
to double savings

E.g.: $72 \div 10 \text{ years} = 7.2\%$ interest needed
to double

CALCULATING SAVINGS

Name: Class/Block: Date:

Savings add up when you follow a regular savings plan. Calculate the answers to the problems below. Show the steps needed to arrive at your answers. You may use an electronic spreadsheet for your calculations if you show the formulas used at each step.

1. If you put \$250 into an investment that paid 5% simple interest each year, how much interest would you earn in five years? What would your savings be worth at the end of five years?

	Year 1	Year 2	Year 3	Year 4	Year 5
Investment	250	262.50	275	287.50	300
Interest	$250 \times 0.05 = 12.50$	12.50	12.50	12.50	12.50
Total	262.50	275	287.50	300	312.50

2. If you put \$250 into an investment that paid 5% compound interest each year, how much interest would you earn in five years? What would your savings be worth at the end of five years?

	Year 1	Year 2	Year 3	Year 4	Year 5
Investment	250	262.50	275.63	289.41	303.88
Interest	$Inv \times 0.05$ 12.50	13.13	13.78	14.47	15.19
Total	262.50	275.63	289.41	303.88	319.07

3. If you put \$240 each year into an investment that paid 5% compound interest each year, how much interest would you earn in five years? What would your savings be worth at the end of five years?

	Year 1	Year 2	Year 3	Year 4	Year 5
Carry over	\$0	252	516.60	794.43	1086.15
Annual Contribution	\$240.00	240	240	240	240
Subtotal	240	492	756.60	1034.43	1326.15
Interest	12	24.60	37.83	51.72	66.31
Total	252	516.60	794.43	1086.15	1392.46