THE STORY OF KAMI AND JAMIL AND ALEX

Part 1: Kami and Jamil

Kami and Jamil are saving for their future retirement. Both choose a bank that offers 2% compound interest. Both invest the same amount—$24,000 of their job earnings—over time.

Kami is able to save more money at first, but Jamil continues to put money in the bank every year. To calculate the compound interest, use the formula from the reading,

$$FV = PV \times (1 + r)^n$$

(Future Value (FV) is equal to Present Value (PV) times 1 plus the interest rate (1 + r) raised to the exponent of the number of interest payments (n).)

Who benefits the most from compound interest? What would you predict?

Age	Kami Invests	Kami's Account	Jamil Invests	Jamil's Account
27	$3000	$3060.00	$1000	$1020.00
28	$3000	$6181.20	$1000	$2060.40
29	$3000		$1000	
30	$3000		$1000	
31	$3000		$1000	
32	$3000		$1000	
33	$3000		$1000	
34	$3000		$1000	
35	$0		$1000	
36	$0		$1000	
37	$0		$1000	
38	$0		$1000	
39	$0		$1000	
40	$0		$1000	
41	$0		$1000	
42	$0		$1000	
43	$0		$1000	
44	$0		$1000	
45	$0		$1000	
46	$0		$1000	
47	$0		$1000	
48	$0		$1000	
49	$0		$1000	
50	$0		$1000	

Part 2: Alex

Alex is Jamil's good friend who started saving money at the same time as Jamil. Like Kami and Jamil, he also saved $24,000 from his earnings over time. His bank did not offer compound interest but offered a 2% savings plan.

See how much money Alex earned without compound interest. Calculate Alex's savings by adding the amount he invests to the account balance and then multiplying by .2. Then for the following year, add the investment for that year to the account balance and multiply by .2.

Age	Alex Invests	Alex's Account
27	$1000	$1020.00
28	$1000	$2040.00
29	$1000	
30	$1000	
31	$1000	
32	$1000	
33	$1000	
34	$1000	
35	$1000	
36	$1000	
37	$1000	
38	$1000	
39	$1000	
40	$1000	
41	$1000	
42	$1000	
43	$1000	
44	$1000	
45	$1000	
46	$1000	
47	$1000	
48	$1000	
49	$1000	
50	$1000	

Questions

1. Both Kami and Jamil invested $24,000 for retirement. Who benefitted the most from compound interest? Explain why.

2. Alex invested $24,000 for retirement in the same way that Jamil did. How much less than Jamil did Alex earn for retirement without compound interest?

3. What advice would you give someone who is thinking about saving for retirement?