LESSON MAKER PRO

Money Over Time

Track steady gains and losses year by year.

HIGH SCHOOL · MM.FPM.A.3

MM.FPM.A.3 "Organize and display financial information using arithmetic sequences to represent simple interest and straight-line depreciation."

NAME _____ DATE _____

THE BIG IDEA

With simple interest, a balance grows by the same dollar amount each year: starting balance times annual rate. With straight-line depreciation, an item loses the same amount each year: (starting value minus final value) / number of years. Start at year 0, then add or subtract that amount to make a sequence.

WORKED EXAMPLE

A $750 deposit earns 8% simple interest each year. Use the table to find its balance at year 3.

SAVINGS BALANCE

Year	Balance
0	$750
1	$810

1. Annual interest: $750 × 0.08 = $60.
2. Year 2: $810 + $60 = $870.
3. Year 3: $870 + $60 = $930.

Answer: $930

PRACTICE 4 problems

1 A $400 deposit earns 5% simple interest yearly. List its balances for years 0 through 2.

ANSWER _____

2 A $680 phone loses $90 in value each year. List its values for years 0 through 2.

ANSWER _____

3 A $250 deposit earns 4% simple interest yearly. Find the annual gain and the balance at year 5.

ANSWER _____

4 Equipment worth $560 now will be worth $140 after 6 years. Find its yearly loss and its value at year 2.

ANSWER _____

APPLY IT Show your work

1 You invest $600 from a summer job at 6% simple interest. List the balances for years 0 through 4.

WORK SPACE

ANSWER _____

2 Your laptop loses value at a steady rate. Use the table to list its values for years 0 through 4.

LAPTOP VALUE

Year	Value
0	$1,100
4	$300

ANSWER _____

CHALLENGE One step up

A $500 deposit earns 10% simple interest yearly. An $800 guitar loses $50 in value yearly. List both sequences until the values match. In what year do they match?

WORK SPACE AND ANSWER

Money Over Time

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A $400 deposit earns 5% simple interest yearly. List its balances for years 0 through 2.	**Year 0: $400; year 1: $420; year 2: $440.**
2	A $680 phone loses $90 in value each year. List its values for years 0 through 2.	**Year 0: $680; year 1: $590; year 2: $500.**
3	A $250 deposit earns 4% simple interest yearly. Find the annual gain and the balance at year 5.	**Annual gain: $10; year 5 balance: $300.**
4	Equipment worth $560 now will be worth $140 after 6 years. Find its yearly loss and its value at year 2.	**Yearly loss: $70; year 2 value: $420.**

PART 2 · APPLY IT

1. **Years 0 through 4: $600, $636, $672, $708, $744.** The annual interest is $600 × 0.06 = $36. Add $36 for each new year.
2. **Years 0 through 4: $1,100, $900, $700, $500, $300.** The laptop loses ($1,100 - $300) / 4 = $200 per year. Subtract $200 for each new year.

CHALLENGE

Deposit, years 0 through 3: $500, $550, $600, $650. Guitar, years 0 through 3: $800, $750, $700, $650. They match at year 3.

Accept sequences labeled by year or listed in year order. Dollar signs may be omitted when the units are clear.