LESSON MAKER PRO

Money Grows Slowly

Track regular saving and simple interest over time.

GRADE 8 · TEKS 8.12.C

8.12.C "explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time;"

NAME _____ DATE _____

REGULAR DEPOSITS ADD UP

A regular deposit is money you add on a schedule, such as every week or every year. For simple interest, use I = Prt for each deposit, where P is the deposit, r is the yearly interest rate as a decimal, and t is the number of years that deposit earns interest. Add all deposits and all interest to find the balance.

WORKED EXAMPLE

An account receives a $70 deposit at the beginning of each year for 2 years. The account pays 5% simple interest each year. Find the balance after 2 years.

1. Total deposits: $70 + $70 = $140.
2. First deposit interest: I = 70 x 0.05 x 2 = $7.
3. Second deposit interest: I = 70 x 0.05 x 1 = $3.50.
4. Balance: $140 + $7 + $3.50 = $150.50.

Answer: $150.50

PRACTICE 6 problems

1 You save $14 each week for 6 weeks in a jar that earns no interest. How much do you save?

ANSWER _____

2 You deposit $30 at the beginning of each month for 8 months. The account earns no interest. What is the balance?

ANSWER _____

3 You invest $90 one time at 10% simple interest for 3 years. What is the balance?

ANSWER _____

4 You deposit $60 at the beginning of each year for 4 years. The account pays 12% simple interest each year. What is the balance after 4 years?

ANSWER _____

5 You deposit $40 at the beginning of each year for 3 years. The account pays 20% simple interest each year. What is the balance after 3 years?

ANSWER _____

6 A $200 deposit earns 6% simple interest for 4 years. Find the interest earned and the final balance.

ANSWER _____

APPLY IT Show your work

1 For college, Ava's family deposits $100 at the beginning of each year for 4 years. The college account earns 10% simple interest each year. How much is in the account after 4 years?

WORK SPACE

ANSWER _____

2 Jalen puts $50 from each year of allowance into a retirement account at the beginning of each year for 3 years. The account earns 8% simple interest each year. What is the balance after 3 years?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Plan A deposits $120 at the beginning of each year for 3 years at 5% simple interest. Plan B deposits $360 at the beginning of the third year at the same rate. Which plan has more money at the end of the third year? Explain why.

WORK SPACE AND ANSWER

ANSWER KEY

Money Grows Slowly

GRADE 8 · TEKS 8.12.C

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	You save $14 each week for 6 weeks in a jar that earns no interest. How much do you save?	**$84**
2	You deposit $30 at the beginning of each month for 8 months. The account earns no interest. What is the balance?	**$240**
3	You invest $90 one time at 10% simple interest for 3 years. What is the balance?	**$117**
4	You deposit $60 at the beginning of each year for 4 years. The account pays 12% simple interest each year. What is the balance after 4 years?	**$312**
5	You deposit $40 at the beginning of each year for 3 years. The account pays 20% simple interest each year. What is the balance after 3 years?	**$168**
6	A $200 deposit earns 6% simple interest for 4 years. Find the interest earned and the final balance.	**Interest: $48; final balance: $248**

PART 2 · APPLY IT

1. **$500** The four deposits earn interest for 4, 3, 2, and 1 years, for total interest of $100. Add the $400 deposited to get $500.
2. **$174** The deposits earn $12, $8, and $4 in interest, for $24 total interest. Add $24 to the $150 deposited.

CHALLENGE

Plan A has $396, and Plan B has $378. Plan A has more because its earlier deposits earn interest for more years.

Accept correct money notation with or without a dollar sign when the value is clear. Students may find total interest first or calculate each deposit's balance separately.