

# 7.13(E)

calculate and compare simple interest and compound interest earnings

**INTERVENE**

<1 min

# Fluency Practice

- What is 32% written as a decimal?
- What is 8% written as a decimal?
- What is  $5 \times 3 \times 2$ ?
- What is  $8^2 + 4^3$ ?

2 min

# Problem Solving Strategies

- **1. Understand the Problem**
    - Read the problem carefully (at least 2 to 3 times)
    - Highlight important information (what do I know)
    - Identify Math Clue words (words that tell you what math operations you need to use)
    - Underline what you need to find
  - **2. Plan of Action (how you will solve this problem in steps)**
    - First I will
    - Then I will
    - Next I will
    - Finally, I will
  - **3. Show your work in steps (solve using your steps)**
  - **4. Check your answer (does my answer make sense? why)**
- <3 min

# What is Interest

- You let someone borrow money and they're paying you a little extra to use that money.

**OR**

- You borrowed money and you're paying a little extra to use that money


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- In this lesson, you're learning about 2 different types of interest. They calculate differently and have different formulas

# What's the difference between simple and compound?

- Simple interest – Interest is earned only on the principal amount (the borrowed amount)
- Compound interest – Interest is earned on both the principal amount (the borrowed amount) **AND** the accumulated interest from the past

# You have formulas!

Simple interest

If the question includes simple interest, use this formula   $I = Prt$

Compound interest

for compound interest, use this formula   $A = P(1 + r)^t$

Make sure you're using the CORRECT formula!

1 min

# I Do

Rita has a loan of \$45,580. This loan has a simple interest rate of 4% per year. What is the amount of interest that Rita will be charged on this loan at the end of one year?

- A** \$47,403.20
- B** \$11,395
- C** \$18,232
- D** \$1,823.20

<5 min

# We do - Question 1

Mr. Juárez opened a savings account with an initial deposit of \$560 and will not make any additional deposits or withdrawals. The account earns 1% simple interest. What is the total amount that Mr. Juárez will have in his account at the end of 3 years?

- A** \$168.00
- B** \$56.00
- C** \$565.60
- D** \$576.80

<5 min



# We Do – Question 2

Arti has a savings account with \$4,382. She doesn't add any more principal into her savings account. If she earns 12% simple interest every year, what will the balance in her savings account be after 2 years?

- A. \$4,907.84
- B. \$5,496.78
- C. \$5,433.68
- D. \$12,055.68

<5 min

## We do - Question 3

Jakoba was offered to open a savings account from two different banks. He compared the offers in a table, shown below.

Bank	Principal	Interest Rate	Type of Interest
Bank 1	\$5,000	5%	Compounded monthly
Bank 2	\$5,000	10%	Simple Interest

If Jakoba doesn't plan to add any principal amount to either savings account in the next 30 years, which bank would yield the largest balance after the 30th year?

- A. Bank 1 would have a higher balance after 30 years than Bank 2
- B. Bank 2 would have a higher balance after 30 years than Bank 1
- C. Bank 1 and Bank 2 would have an equal balance after 30 years
- D. There is not enough information to solve this problem

<5 min

## We do - Question 4

Javed opened a savings account and deposited \$400.00 as principal. The account earns 3% interest, compounded annually. What is the balance after 5 years?

- A. \$460.00
- B. \$385.43
- C. \$542.85
- D. \$463.71

<5 min

## Q5

Jonathan has an auto loan in the amount of \$26,504. The loan has a simple interest rate of 5% per year. How much does Jonathan pay in interest at the end of one year?

- A. \$13,252
- B. \$1,325.20
- C. \$25,178.80
- D. \$1,355.99

# You Do

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- Go back to Intervene to take your quiz!

# Answer Key

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I Do – D

We Do 1 – D

We Do 2 – C

We Do 3- A

We Do 4 – D

We Do 5 – B