Simple or Compound Interest MATCH Game

STANDARD: TEKS 8.12(D): Calculate and compare simple and compound interest earnings.

PLAYERS: 2-4, **BEST PLAYED WITH PARTNERS**

MATERIALS:
1 set of match cards
Answer Key
Recording Sheet
Passport

DIRECTIONS:

OBJECT OF THE GAME IS TO COMPLETE AS MANY SETS OF **FOUR** CARDS AS POSSIBLE

1. Determine if your group is going to play with partners or by themselves.
2. Turn all cards face down in the middle of the players.
3. Turn over 2 cards at a time, trying to match the cards.
4. If a match is made, the players keep the matched cards.
5. **LEAVE UNMATCHED CARDS FACE UP SO OTHERS MAY MATCH WITH THEM.**
6. Play continues with another player/pair when no match is made.
7. When a match of two cards is made, then the two cards may be set in front of the pair. They must FIND THE THIRD AND FOURTH CARDS. A complete match isn't made until ALL FOUR CARDS are found.
8. If a player turns over a card that matches another pair's 2-card set, they may "steal" the pair's cards and keep the complete match.

CHALLENGE: Time how long it takes you to match ALL cards, then try to beat that time.

A fireman invests $40,000 in a retirement account with a simple interest rate of 6% for 10 years.	$40,000 PRINCIPAL
$I = Prt$	6% INTEREST
A teacher invests $40,000 in a retirement account with a compounded interest rate of 6% for 10 years.	$40,000 PRINCIPAL
$A = P(1+r)^t$	6% INTEREST

Iman inherited $8,000 and saved it in an account earning 8.7% simple interest. How much will there be in 5 years?	$8,000 PRINCIPAL
$I = Prt$	6% INTEREST
Tisha invests $2,000 in a savings account with a compounded interest rate of 4.2% for 4 years.	$2,000 PRINCIPAL
$A = P(1+r)^t$	4.2% INTEREST

Todd deposited $1,600 in an account that earns 7% simple interest over 2 years.	$1.600 PRINCIPAL
$I = Prt$	7% INTEREST
Mia deposited $1,600 in an account that earns 7% compounded interest over 2 years.	$1,600 PRINCIPAL
$A = P(1+r)^t$	7% INTEREST

Selena deposited $1,000 in an account that earns 5% simple interest for a year.	$1,000 PRINCIPAL
$I = Prt$	5% INTEREST
Mandi left $673 in a savings account that has compounded interest of 6.8% for a year.	$673 PRINCIPAL
$A = P(1+r)^t$	6.8% INTEREST

Names:_____ Simple or Compound MATCH Game, RECORDING SHEET

Find the interest earned in each situation and the ending total amount. Show your work.

Todd deposited $1,600 in an account that earns 7% simple interest over 2 years.

Mia deposited $1,600 in an account that earns 7% annually compounded interest over 2 years.

Who made the best investment? Todd or Mia? Why? _____

_____

_____

A fireman invests $40,000 in a retirement account with a simple interest rate of 6% for 10 years. How much retirement does he have now?

A teacher invests $40,000 in a retirement account with an annual compounded interest rate of 6% for 10 years. How much retirement does he have now?

Who made the best investment? Why? _____

_____

_____

Name

Simple or Compound Interest MATCH Game

In the problem below, which formula from the STAAR REFERENCE MATERIALS will you use to find the answer? Why? Write your response in complete sentences, then use the formula to solve the problem. Show your work, please.

A customer will borrow $12,000 to buy a car. Which loan option would allow the customer to pay the least amount of interest?

F A 4-year loan with a 5.2% annual simple interest rate

G A 5-year loan with a 4.2% annual simple interest rate

H A 6-year loan with a 4.7% annual simple interest rate

J A 3-year loan with an 8.4% annual simple interest rate

Circle the correct solution. Show your work next to the problem. Explain why the other answer choices could not be correct.

Ben deposits $1,750 into each of two savings accounts.

- Account I earns 2.75% annual simple interest.
- Account II earns 2.75% interest compounded annually.

Ben does not make any additional deposits or withdrawals. Which amount is closest to the difference between the interest Ben will earn in Account I and the interest Ben will earn in Account II at the end of 2 years?

A $96.25

B $1.32

C $97.57

D $193.82

Simple interest

$$I = p \times r \times t$$

Compound interest

$$A = P(1 + r)^t$$

I = interest earned after t years

p = money borrowed or invested

r = annual interest rate

t = the length of time you borrow or invest

A = accumulated amount

STAAR GRADE 8 MATHEMATICS REFERENCE MATERIALS

Slope-intercept form	$y = mx + b$
Direct variation	$y = kx$
Slope of a line	$m = \frac{y_2 - y_1}{x_2 - x_1}$

CIRCUMFERENCE

Circle	$C = 2\pi r$	or	$C = \pi d$

AREA

Triangle	$A = \frac{1}{2}bh$
Rectangle or parallelogram	$A = bh$
Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$
Circle	$A = \pi r^2$

SURFACE AREA

	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$
Cylinder	$S = 2\pi rh$	$S = 2\pi rh + 2\pi r^2$

VOLUME

Prism or cylinder	$V = Bh$
Pyramid or cone	$V = \frac{1}{3}Bh$
Sphere	$V = \frac{4}{3}\pi r^3$

Pythagorean theorem	$a^2 + b^2 = c^2$
Simple interest	$I = Prt$
Compound interest	$A = P(1 + r)^t$