

HOMEWORK... Questions?

p. 452: #1 - 6, 10, 11

② ⑤ ⑥

Gr. 10

$$I = Prt$$

&

$$A = P + I$$

$$I = A - P$$

OR

$$A = P + Prt$$

$$A = P(1 + rt)$$

2. Cam has $\$5000$ to invest. He wants his principal to grow to $\$6500$ in 5 years so that he can afford a new drum kit.

a) What simple interest rate will allow him to meet his goal?

b) Suppose that interest is paid semi-annually and Cam withdraws all the money after 3.25 years. How much money will he have?



$$I = A - P$$

$$I = 6500 - 5000$$

$$I = 1500$$

$$I = \frac{P \cdot r \cdot t}{P \cdot t}$$

$$\frac{I}{P \cdot t} = r$$

$$\frac{1500 \times 100\%}{5000(5)} = r$$

$$6\% = r$$

b) $t = 3.25 \text{ yrs}$

$$A = P + P \cdot r \cdot t$$

$$A = 5000 + 5000(0.06)(3.25)$$

$$A = \$5900$$

5. Both Brad and Chris purchased a \$15 000 GIC.
- Brad's GIC has a term of 6 years and a simple interest rate of 3.2%.
 - Chris's GIC has a term of 5 years at a simple interest rate of 3.3%.
- Whose GIC will have the greater future value at maturity? Explain.

Amount

Brad

Greater Time made a difference Chris

$15000 + 15000 * 0.03$ $2 * 6$ $\$ 17880$

$15000 + 15000 * 0.03$ $3 * 5$ 17475

6. a) A $\overset{P}{\$12\,000}$ Canada Savings Bond has a term of $\overset{t}{10}$ years. What interest rate is needed for the future value of the CSB to be $\overset{A}{\$15\,000}$ at maturity? $I = A - P = 15000 - 12000 \quad I = 3000$
- b) Suppose that the interest rate from part a) was increased by 1%. What would be the future value of the CSB at maturity?

a) $r = \frac{I}{Pt}$

$$= \frac{3000}{(12000)(10)} \times 100\%$$

$$= 2.5\%$$

b) $r = 3.5\%$



$$A = 12000 + 12000(0.035)(10)$$

$$A = \$16200$$

WARM-UP...

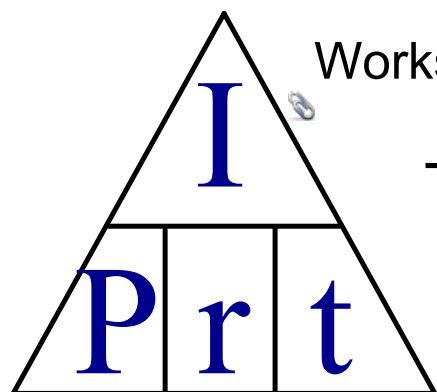
You earned \$107.42 simple interest on a \$671.37 investment over four years.

What was the interest rate?

$$r = \frac{I}{Pt} \\ = \frac{107.42}{671.37 \times 4} \times 100\% \\ = 4\%$$



PRACTICE rearranging... $I = Prt$



Worksheet - Rearranging Simple Interest.pdf

Text p. 452: #10, 11, 12

Attachments

Worksheet - Rearranging Simple Interest.pdf