Name _____ Class _____ Date _____

Reteaching 6-8

Simple and Compound Interest

Simple Interest

Alicia put $200 in a savings account to earn interest. The interest rate is 5% per year. How much interest will the account earn in $2\frac{1}{2}$ years?

Use this formula to solve:

$$\text{Interest} = \textit{principal} \cdot \text{rate} \cdot \text{time in years}$$

$$I = p \cdot r \cdot t$$

$$= 200 \cdot 0.05 \cdot 2.5$$

$$= 25$$

In $2\frac{1}{2}$ years, the account will earn $25 in interest.

Compound Interest

Alex put $500 in an account that earns 6% interest, compounded annually. What will be the account balance after $2\frac{1}{2}$ years?

Use this formula to solve:

$$\text{Balance} = \text{principal} \cdot (1 + \text{rate})^{\text{time in years}}$$

$$B = p(1 + r)^t$$

Use a calculator to evaluate:

$$B = 500(1 + 0.06)^{2.5}$$

500 × 1.06 y^x 2.5 = 578.41

The balance will be $578.41.

Find the interest earned in each account.

1. $300 at 5% simple interest for 1 year

_____

2. $300 at 5% simple interest for 2 years

_____

3. $500 at 8% simple interest for 2 years

_____

4. $1,000 at 6% simple interest for 3 years

_____

5. $1,200 at 4.5% simple interest for 3 years

_____

6. $950 at $5\frac{1}{2}$% simple interest for 6 years

_____

Find the final balance in each account.

7. $800 at 4% compounded annually for 3 years

_____

8. $1,200 at 5% compounded annually for 4 years

_____

9. $2,000 at $3\frac{1}{2}$% compounded annually for 2 years

_____

10. $4,500 at 8% compounded annually for 3 years

_____

Solve.

11. Ms. Ito is lending her nephew Dan $3,000 for college. She is charging him 2% simple interest each year. He will pay his aunt back in four years. How much interest will he pay?

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