1. Find the value of an annuity in which $120 is deposited at the end of each year in an account paying 5% compounded annually for 8 years.

2. Find the value of annuity in which $2,000 is deposited in an account paying 4% APR compounded monthly for 18 years.

3. Garrett needs $10,000 in 8 years. What amount should he deposit at the end of each year into an account paying 6% compounded annually to accumulate the $10,000? (Sinking Fund)

4. Thomas wants to buy a motorcycle in 6 years and expects it will cost $12,000. How much should he deposit at the end of each month into an account paying 6% compounded monthly in order have enough for the motorcycle? (Sinking Fund)
1. Find the value of an annuity in which $120 is deposited at the end of each year in an account paying 5% compounded annually for 8 years.

\[
R = 120 \\
\frac{1}{r} = 0.05 \\
n = 8
\]

\[
S_8 = 120 \left( \frac{(1.05)^8 - 1}{0.05} \right) = 1145.89
\]

2. Find the value of annuity in which $2,000 is deposited in an account paying 4% APR compounded monthly for 18 years.

\[
R = 2000 \\
\frac{1}{r} = 0.04 \frac{1}{12} \\
n = 18 \times 12 = 216
\]

\[
S_{216} = 2000 \left( \frac{(1 + 0.04/12)^{216} - 1}{0.04/12} \right) = 18,440
\]

3. Garrett needs $10,000 in 8 years. What amount should he deposit at the end of each year into an account paying 6% compounded annually to accumulate the $10,000?

\[
R =? \\
\frac{1}{r} = 0.06 \\
n = 8 \\
S_n = 10,000
\]

\[
10,000 = R \left( \frac{(1.06)^8 - 1}{0.06} \right) \Rightarrow R = 1010.36
\]

4. Thomas wants to buy a motorcycle in 6 years and expects it will cost $12,000. How much should he deposit at the end of each month into an account paying 6% compounded monthly in order have enough for the motorcycle?

\[
R =? \\
\frac{1}{r} = 0.06 \frac{1}{12} \\
n = 6 \times 12 = 72 \\
S_n = 12,000
\]

\[
12,000 = R \left( \frac{(1.005)^{72} - 1}{0.005} \right) \Rightarrow R = 183.87
\]