## Daily Exercise Solution

## Given information:

| Case | $I_{0}$ | $I_{1}$ | $r$ |
| :--- | :--- | :--- | :--- |
| A | 80,000 | 132,000 | $10 \%$ |
| B | 20,000 | 210,000 | $5 \%$ |
| C | 150,000 | 0 | $20 \%$ |

Definitions of PVI and FVI:

$$
\begin{aligned}
& P V I=I_{0}+\frac{I_{1}}{1+r} \\
& F V I=I_{1}+I_{0}(1+r)
\end{aligned}
$$

Case A:

$$
\begin{aligned}
& 1+r=1+0.1=1.1 \\
& \mathrm{PVI}=80,000+132,000 / 1.1=200,000 \\
& \mathrm{FVI}=132,000+80,000 * 1.1=220,000
\end{aligned}
$$



Case B:

$$
\begin{aligned}
& 1+\mathrm{r}=1+0.05=1.05 \\
& \mathrm{PVI}=0+252,000 / 1.05=240,000 \\
& \mathrm{FVI}=252,000+0 * 1.05=252,000
\end{aligned}
$$



All but $e$ require borrowing

Case C:

$$
1+r=1+0.2=1.2
$$

$$
\begin{aligned}
& \mathrm{PVI}=150,000+0 / 1.2=150,000 \\
& \mathrm{FVI}=0+150,000 * 1.2=180,000
\end{aligned}
$$



All but $e$ require saving

