

$$\begin{aligned}
 1) \quad & BAC = 100,000 \text{ USD} \\
 & AC = 60,000 \text{ USD} \\
 & PV = 50,000 \text{ USD} \\
 & EV = 40\% = 40,000 \text{ USD}
 \end{aligned}$$

$$\begin{aligned}
 CPI &= EV/AC \\
 &= \frac{40,000}{60,000} = 0.67
 \end{aligned}$$

$$\begin{aligned}
 EAC &= BAC/CPI \\
 &= \frac{100,000}{0.67} = 149,253.73
 \end{aligned}$$

$$2) \quad AC = 200,000 \text{ USD}$$

$$BAC = 500,000 \text{ USD}$$

$$EV = 175,000$$

$$\begin{aligned}
 EAC &= 200,000 + (500,000 - 175,000) \\
 &= 200,000 + 325,000 \\
 &= 525,000 \text{ USD}
 \end{aligned}$$

$$3) \quad BAC = 500,000 \text{ USD}$$

$$AC = 200,000 \text{ USD}$$

$$EV = 175,000 \text{ USD}$$

$$PV = 225,000 \text{ USD}$$

$$\begin{aligned}
 SPI &= EV/PV \\
 &= \frac{175,000}{225,000} = 0.78
 \end{aligned}$$

$$\begin{aligned}
 CPI &= EV/AC \\
 &= \frac{175,000}{200,000} = 0.88
 \end{aligned}$$

$$EAC = AC + [(BAC - EV) / (CPI * SPI)]$$

$$= 200,000 + (500,000 - 175,000) / (0.88 * 0.78)$$

$$= 200,000 + \frac{325,000}{0.69}$$

$$= 200,000 + 471,000$$

$$= 671,000 \text{ USD}$$