

1. A

At Year 0, the net cash - \$500, million

At Year 1 and Year 2.

Net cash flow

$$= \$30,000 \times 10,000 - 10,000 \times 20\% \times \$200,000$$

$$= \$300 \text{ million} - \$40 \text{ million}$$

$$= \$260 \text{ million}$$

$$NPV = -\$500 \text{ million} + \frac{\$260 \text{ million}}{1.1}$$

$$+ \frac{\$260 \text{ million}}{1.1^2}$$

$$= -\$48.76 \text{ million}$$

2. E

$$NPV = -\$12,000$$

$$+ \frac{\$1,000}{1.1^2} + \frac{\$1,000}{1.1^6} + \dots$$

$$+ \frac{\$4,000}{1.1^4} + \frac{\$4,000}{1.1^8} + \dots$$

$$= -\$12,000 + \frac{\$1,000}{1.1^2} \frac{1}{1 - \frac{1}{1.1^4}}$$

$$+ \frac{\$4,000}{1.1^4} \frac{1}{1 - \frac{1}{1.1^4}}$$

$$= -773.97$$