

1 Visteon Supplies auto components. Engineer is on a committee to purchase a new equipment. Visteon will make semi-annual payments. 3 offers <sup>(bids)</sup> (at the same price) are received but at different interest rates.

Bid # 1: 9% per year, compounded

Bid # 2: 3% per quarter, <sup>quarterly</sup>

compounded quarterly

Bid # 3: 8.8% per year compounded

monthly

Which bid should be selected?

Effective quarterly rates:

$$\text{Bid \# 1} \% \quad 9\%/4 = 2.25\%$$

$$\text{Bid \# 2} \% \quad 3\%$$

$$\text{Bid \# 3} \% \quad \left(1 + \frac{0.088}{12}\right)^3 - 1 = 0.0222 = 2.22\%$$

Bid # 3 is best.

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Or you can find effective annual rates

$$\text{Bid \# 1} \% \quad \left(1 + \frac{0.09}{4}\right)^4 - 1 = 9.31\%$$

$$\text{Bid \# 2} \% \quad 1.03^4 - 1 = 12.55\%$$

$$\rightarrow \text{Bid \# 3} \% \quad \left(1 + \frac{0.088}{12}\right)^{12} - 1 = 9.16\%$$