

37 Suppose the revenue in dollars from the sale of X campers is given by:-

$$R(x) = 60000x + 40000(10+x)^{-1} - 4000$$

(a) Find the marginal revenue when 10 units are sold

$$\begin{aligned} \overline{MR} = R'(x) &= 60000 + 40000(-1)(10+x)^{-2} \quad (1) \\ &= 60000 - \frac{40000}{(10+x)^2} \end{aligned}$$

$$\begin{aligned} R'(10) &= 60000 - \frac{40000}{(10+10)^2} \quad \boxed{\text{10000}} \\ &= 60000 - \frac{40000}{20^2} \\ &= 60000 - 100 \\ &= 59900 \end{aligned}$$

b) How is revenue changing when 10 units are sold

An 11th unit sold would change revenue by
about \$59900