

Question

Let take that:

ATC – average total cost;

TC – total cost;

Q – total output;

FC – fixed cost;

VC – variable cost.

We will have:

$$ATC = \frac{TC}{Q}$$

$$\left\{ \begin{array}{l} TC = FC + VC = \left\{ \begin{array}{l} FC = \$6 \\ VC = 7 \cdot \$10 \end{array} \right. = \$6 + 7 \cdot \$10 = \$6 + \$70 = \$76 \Rightarrow \\ Q = Q_6 + MP_7 = 90 + 4 = 94 \end{array} \right.$$

$$\Rightarrow ATC = \frac{TC}{Q} = \frac{\$76}{94} = \$0.81 \text{ per unit of output.}$$

Answer: \$0.81 per unit of output.