

Mathematical Cost Functions

$$C = 10 + 20q + 4q^2$$

The Linear Cost Function

$$C = a + bq$$

$$C = 3 + 5q$$

Average Cost for Linear Cost Functions

$$AC = \frac{C(q)}{q}$$

Average Cost for Linear Cost Functions

$$AC = \frac{C(q)}{q}$$

$$C = a + bq$$

Average Cost for Linear Cost Functions

$$AC = \frac{C(q)}{q}$$

$$C = a + bq$$

$$AC = \frac{a}{q} + b$$

Average Cost for Linear Cost Functions

$$C = 3 + 5q$$

$$AC = \frac{3}{q} + 5$$

Marginal Cost for
Linear Cost Functions

$$MC = \frac{dC(q)}{dq}$$

Marginal Cost for
Linear Cost Functions

$$MC = \frac{dC(q)}{dq}$$

$$C = a + bq$$

Marginal Cost for
Linear Cost Functions

$$MC = \frac{dC(q)}{dq}$$

$$C = a + bq$$

$$MC = b$$

Marginal Cost for
Linear Cost Functions

$$C = 3 + 5q$$

$$MC = 5$$

The Quadratic Cost Function

$$C = a + bq + cq^2$$

$$C = 4 + 5q + q^2$$

Average Cost for
Quadratic Cost Functions

$$AC = \frac{C(q)}{q}$$

$$C = a + bq + cq^2$$

Average Cost for Quadratic Cost Functions

$$AC = \frac{C(q)}{q}$$
$$C = a + bq + cq^2$$
$$AC = \frac{a}{q} + b + cq$$

Average Cost for Quadratic Cost Functions

$$C = 4 + 5q + q^2$$
$$AC = \frac{4}{q} + 5 + q$$

Marginal Cost for Quadratic Cost Functions

$$MC = \frac{dC(q)}{dq}$$
$$C = a + bq + cq^2$$

Marginal Cost for Quadratic Cost Functions

$$MC = \frac{dC(q)}{dq}$$
$$C = a + bq + cq^2$$
$$MC = b + 2cq$$

Marginal Cost for Quadratic Cost Functions

$$C = 4 + 5q + q^2$$
$$MC = 5 + 2q$$

End

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