

TC

Q

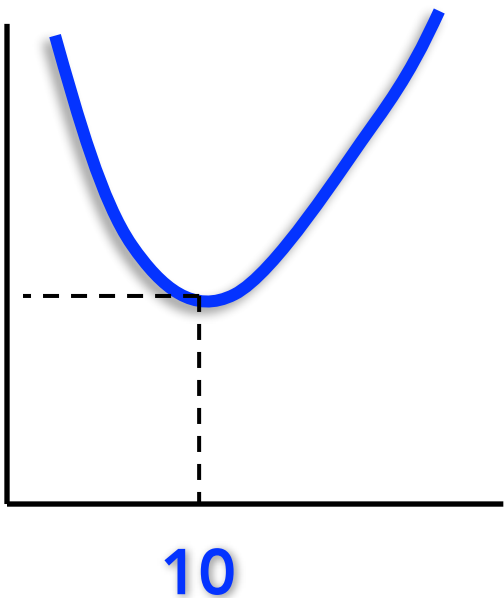
ATC

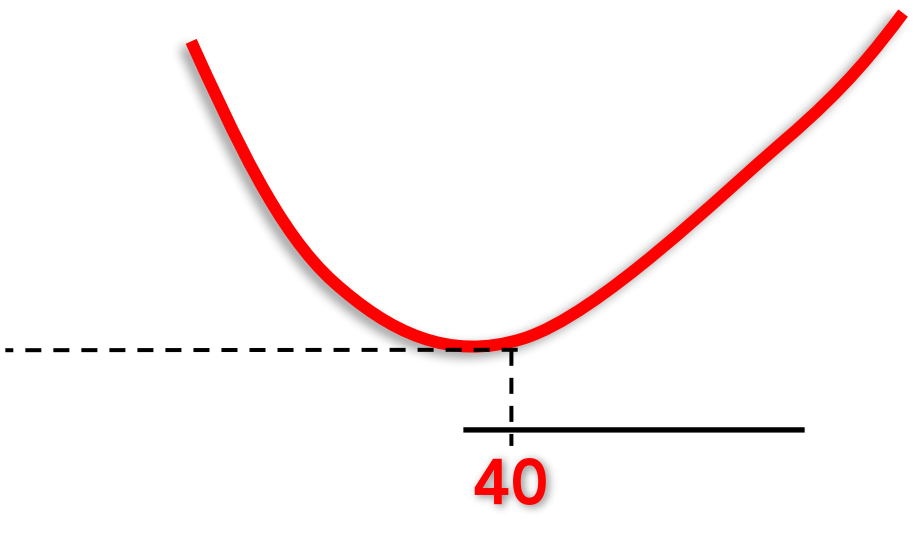
=

A white speech bubble with a black outline and a black tail pointing downwards and to the left. Inside the bubble, the text "\$20" is written in a bold, blue, sans-serif font.

\$20

\$20





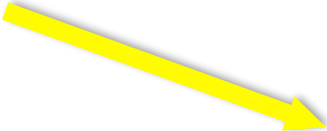
\$10

ATC



ATC

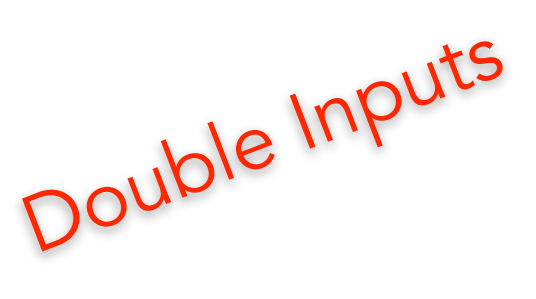
Our Economies of Scale



Increasing Returns to Scale

Reduction in costs
due to larger plant

Doubled Costs

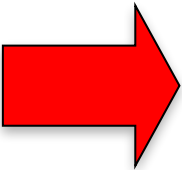


Double Inputs

2TC

4Q

More than
Double Output





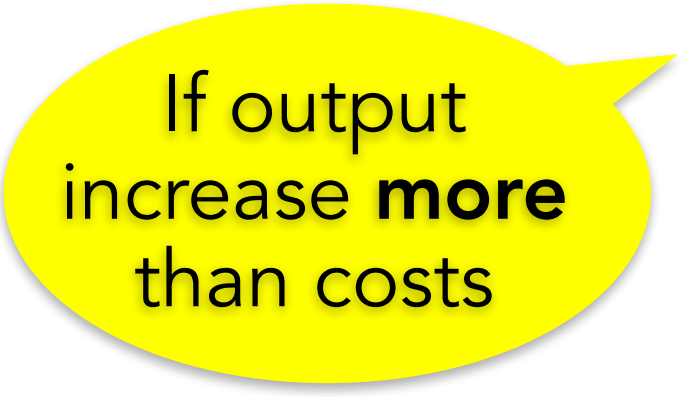
= ATC

$$= \frac{200}{10}$$

$$= \frac{2(200)}{4(10)}$$




ATC
decrease

A bright yellow speech bubble with a tail pointing towards the top right corner. Inside the bubble, the text "If output increase **more** than costs" is written in black. The word "more" is bolded.

If output
increase **more**
than costs

An example



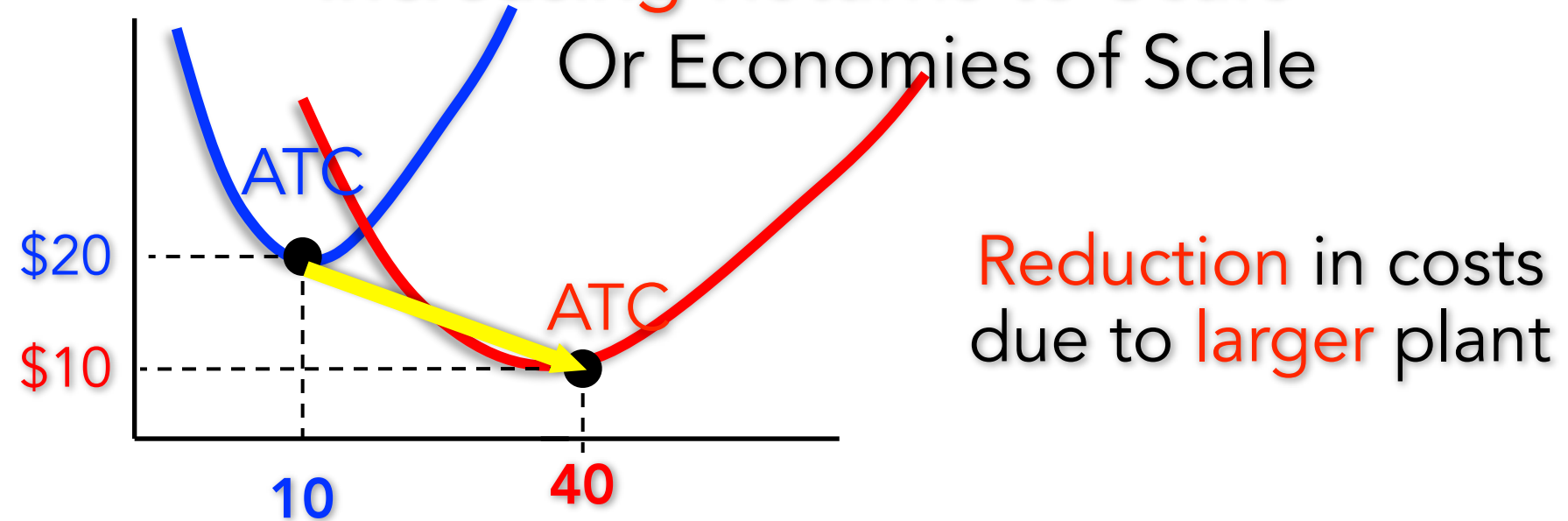
Lowest possible
cost per unit with this
plant size

To reduce costs the firm
has to expand the plant

In a larger plant, if the firm
use **double** the inputs,
then costs also **double**

Because the firm can use
more productive
technology, output **more
than doubles**

Increasing Returns to Scale Or Economies of Scale



Double Inputs

Double Costs

If output increase **more** than costs

more than double Output

ATC decrease

$$ATC = \frac{TC}{Q} = \frac{200}{20} \rightarrow \frac{2TC}{4Q} = \frac{2(200)}{4(10)}$$

Increasing Returns to Scale

output