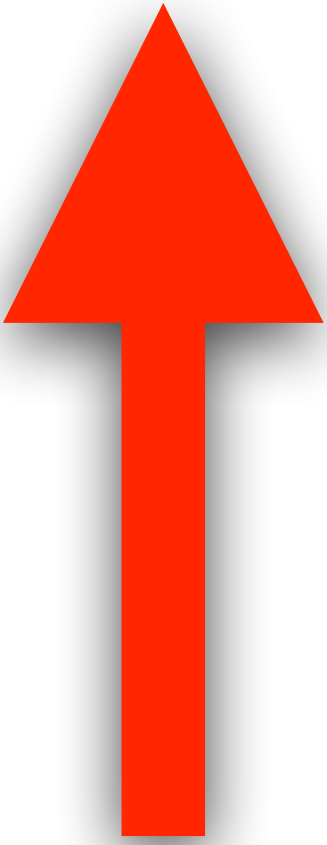
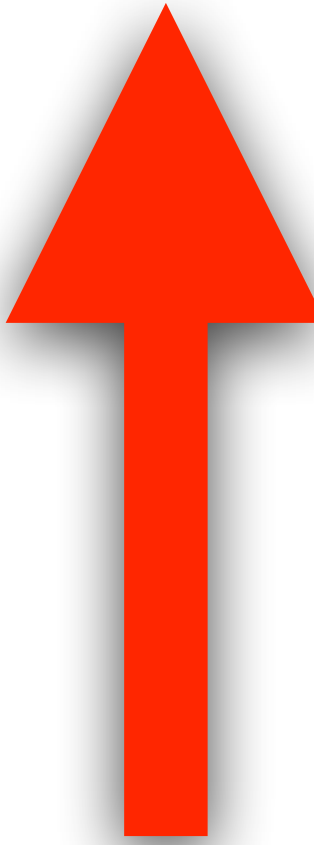
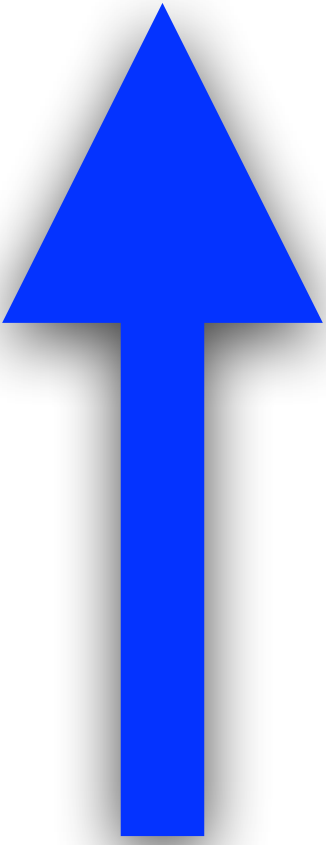
600	710	998	1218	1402	1568	1710
500	650	914	1114	1282	1428	1568
400	582	818	998	1146	1282	1402
300	508	710	864	998	1114	1218
200	418	582	710	818	914	998
100	300	418	508	582	650	710
	100	200	300	400	500	600



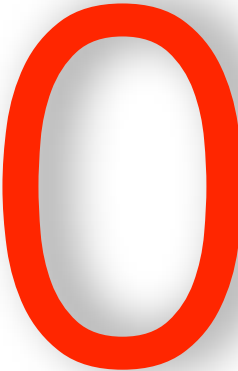
Double Inputs

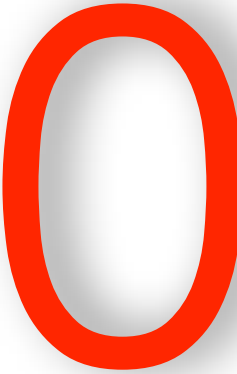


Triple Inputs

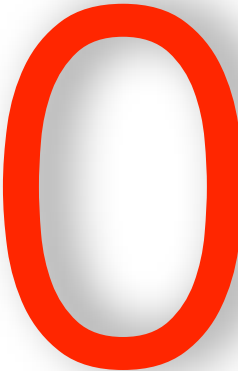


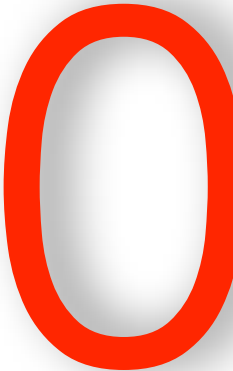
Decreasing Returns to Scale





4





500

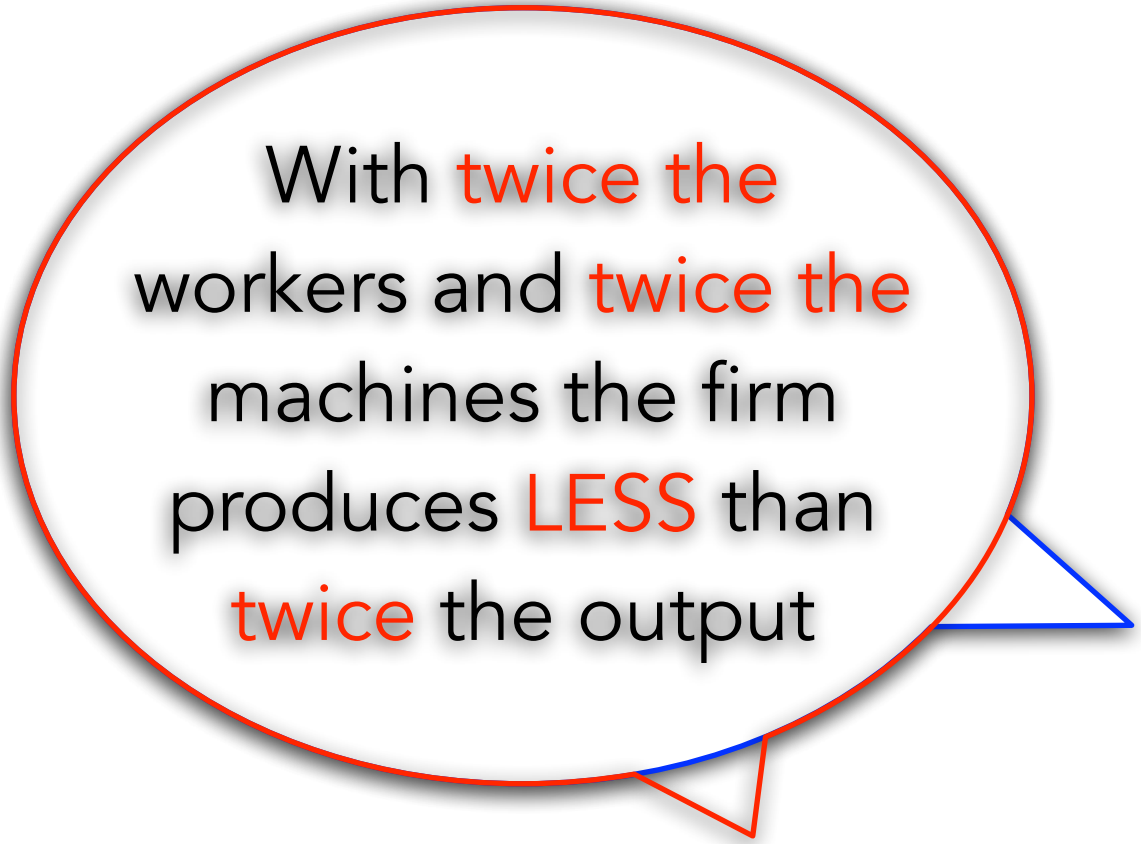
500

600

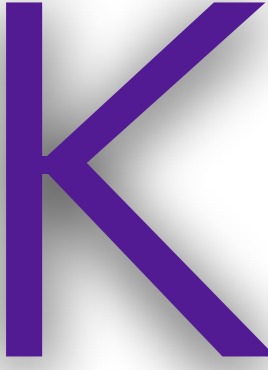
600

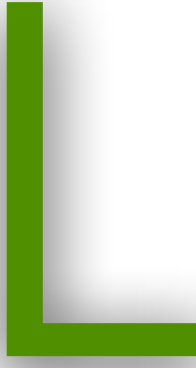
If the firm grows larger it must add more layers of management just to keep production going

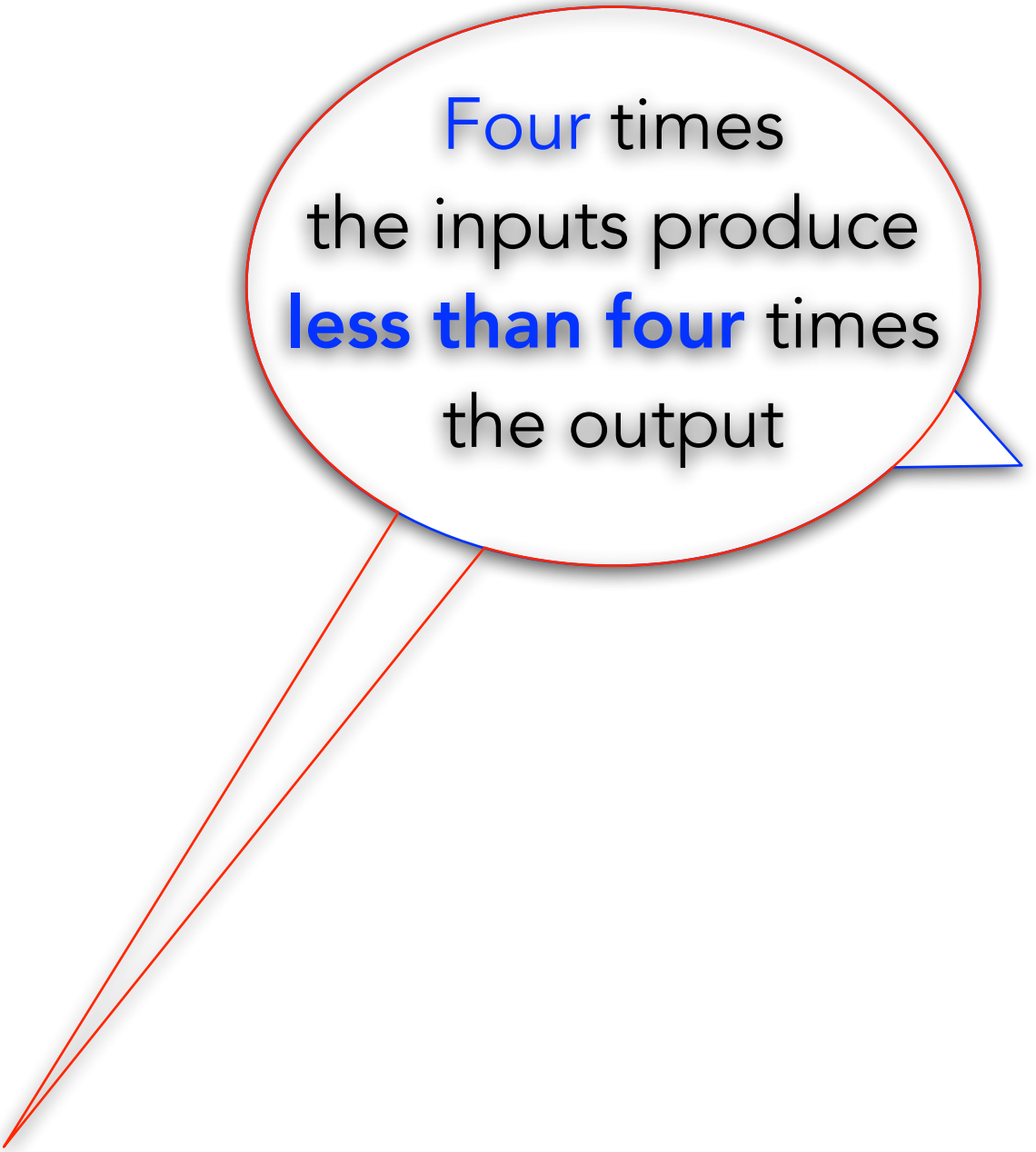
With 100 workers and 100 machines the firm produces 300 units of output

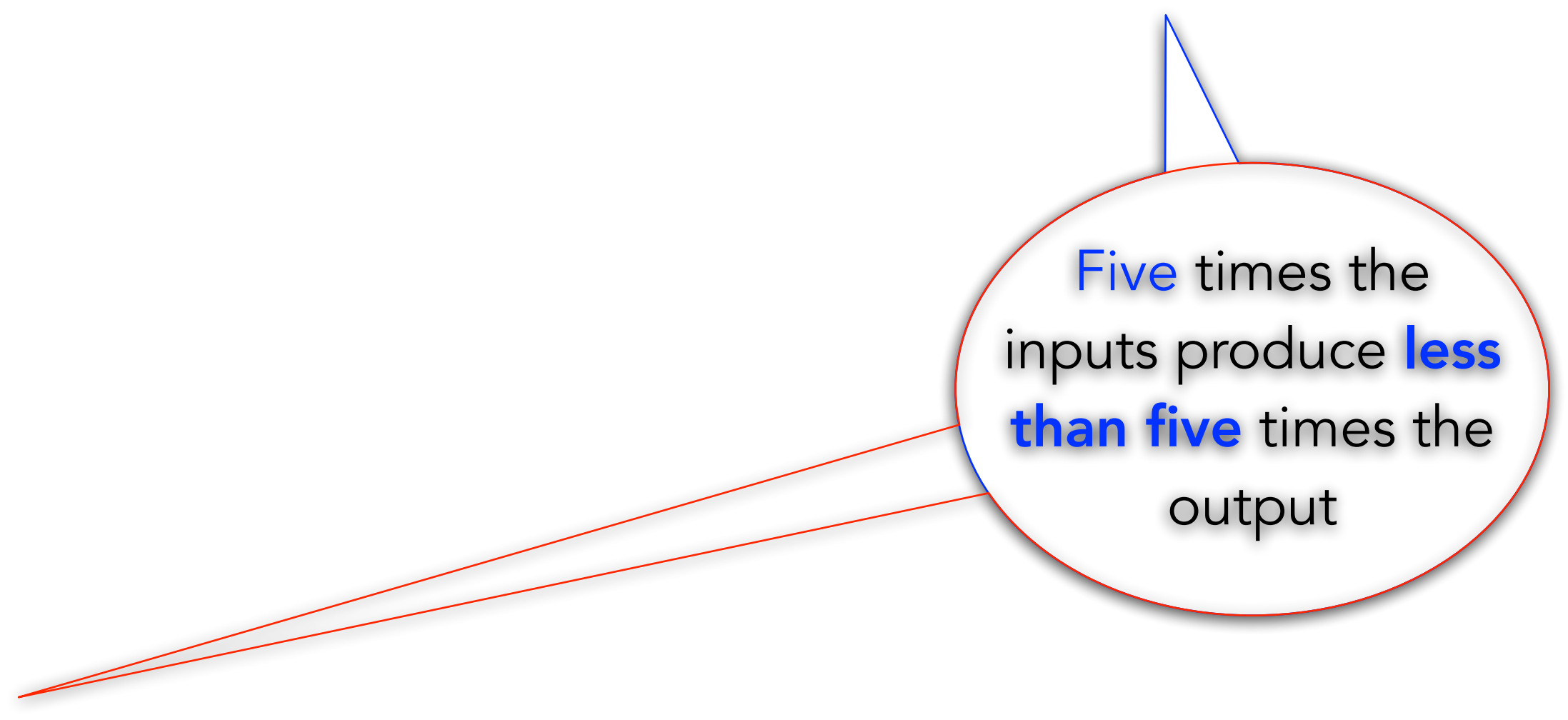

With twice the
workers and twice the
machines the firm
produces LESS than
twice the output

With three times the number of workers and machines the firm produces **less than three** times as many units of output

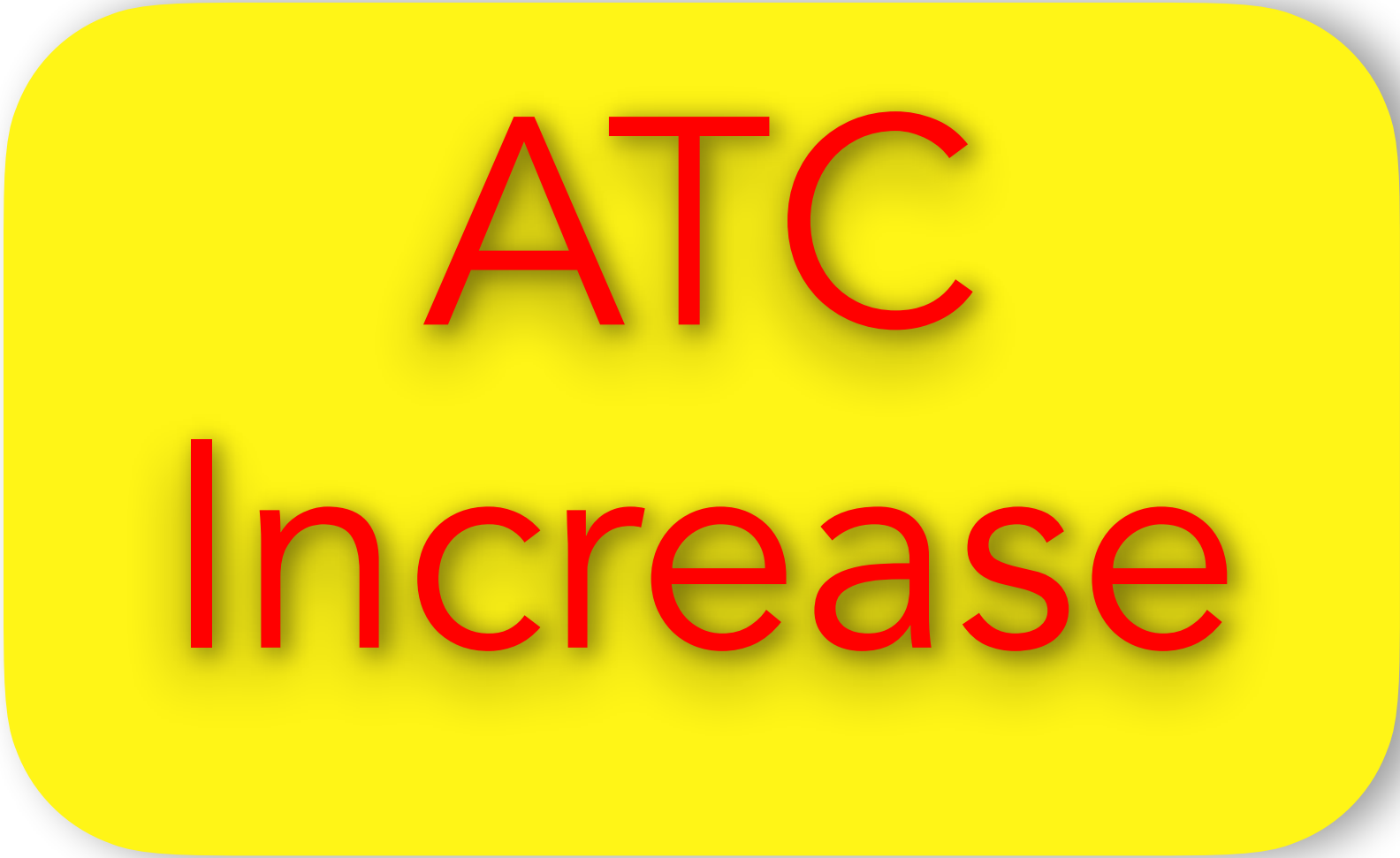





Four times
the inputs produce
less than four times
the output


Five times the inputs produce less than five times the output

Total Product


ATC
Increase

If output increase **less than** inputs and costs

400

400

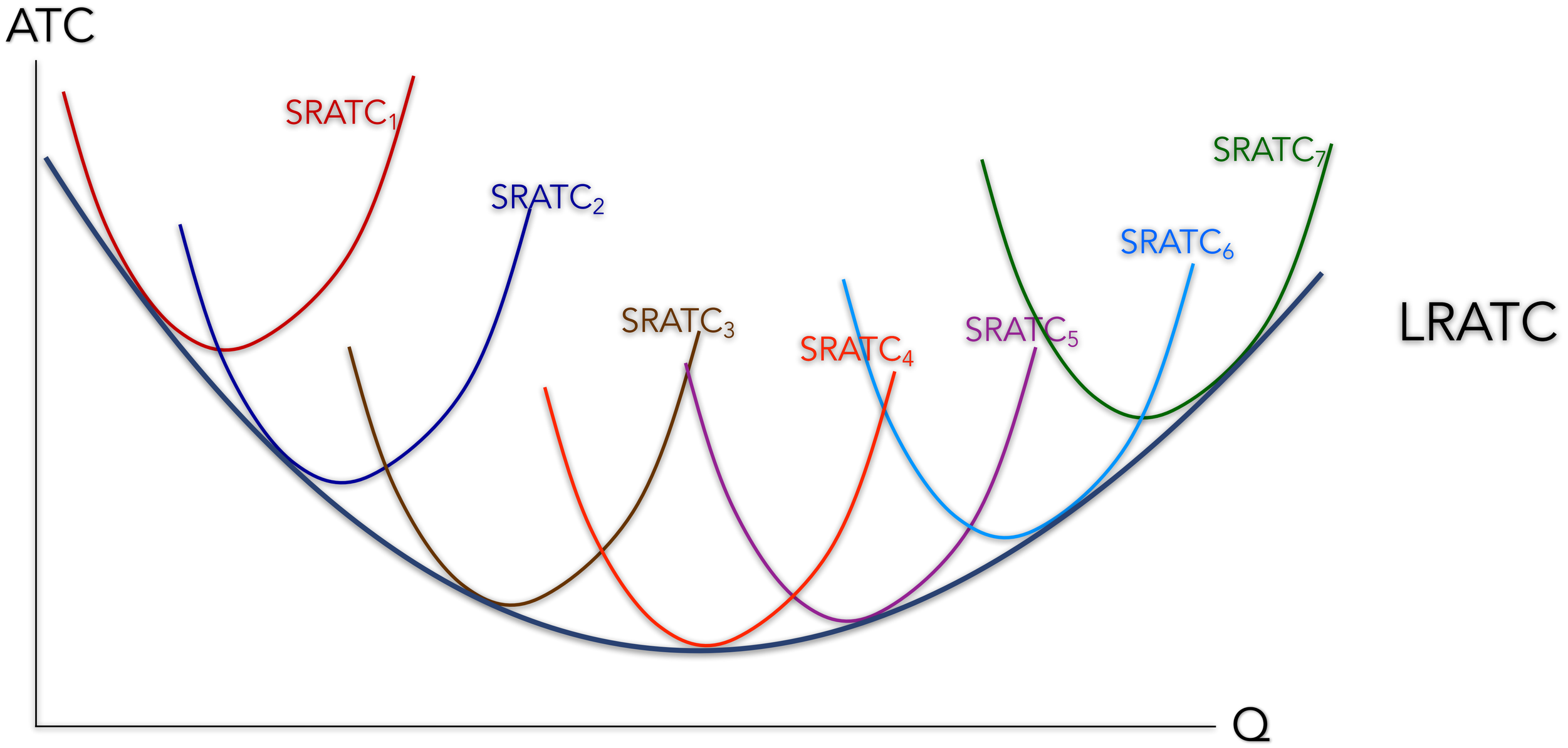
Decreasing Returns to Scale

ATC Increase

K	100	200	300	400	500	600
600	710	998	1218	1402	1568	1710
500		4	1114	1282	1428	1568
400		3	998	1146	1282	1402
300	508	710	864	998	1114	1218
200	418	582	710	818	914	998
100	300	418	508	582	650	710
	100	200	300	400	500	600

If output increase **less than** inputs and costs

L


ATC
SRATC1
SRATC2
SRATC3
SRATC4
SRATC5
SRATC6
SRATC7
LRATC
Q