4 Firm Concentration Ratio

100+0+0+0 = 100%

Number of Firms

Share of the market

2

10,000

100%

50%

100/10,000

=0.01%

The Herfindahl–Hirschman Index HHI

$100^2 = 10{,}000$

50+50+0+0 = 100%

$$0.01+0.01+0.01+0.01 = 0.04\%$$

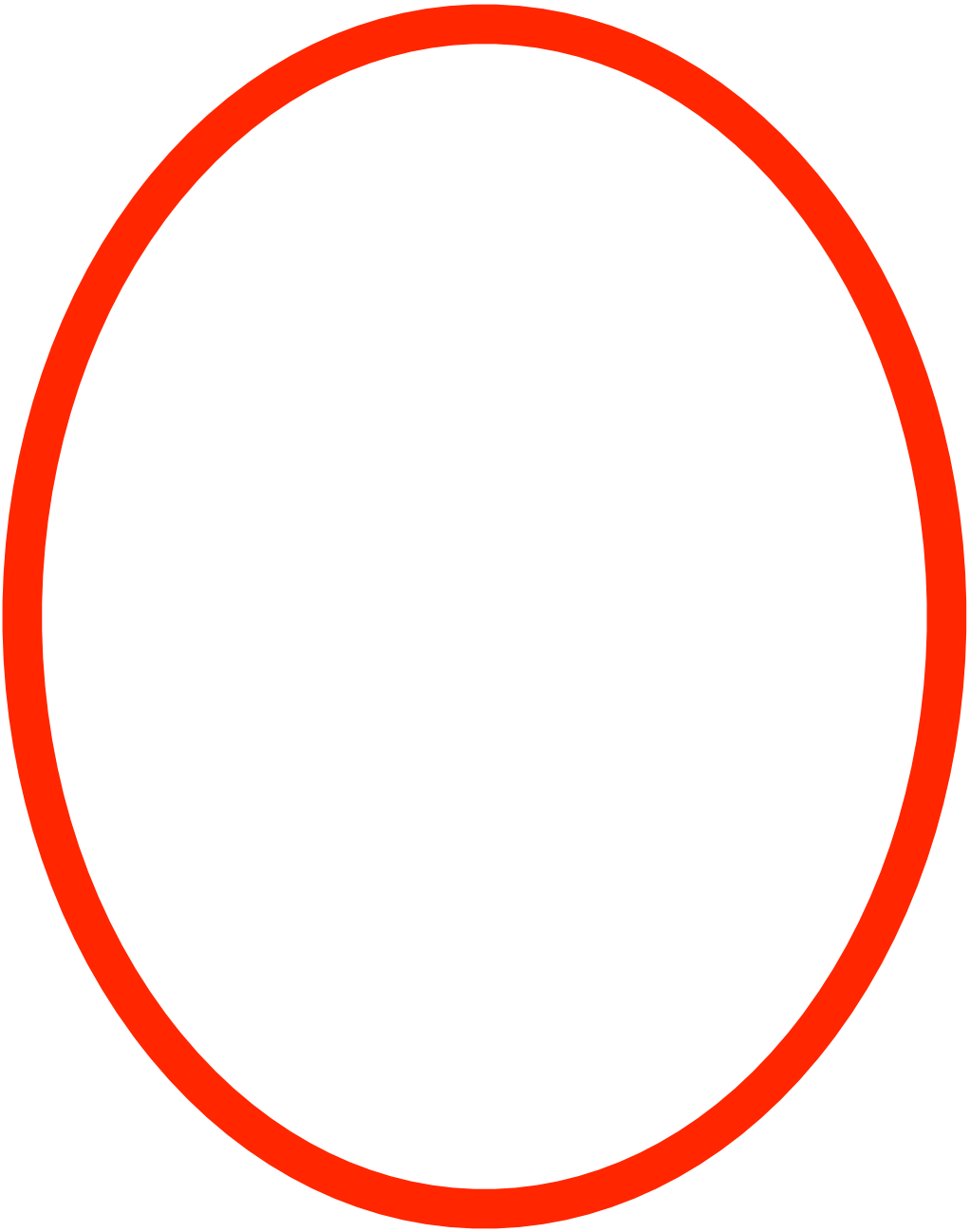
$$50^2+50^2= 2 \times (50^2) = 5{,}000$$

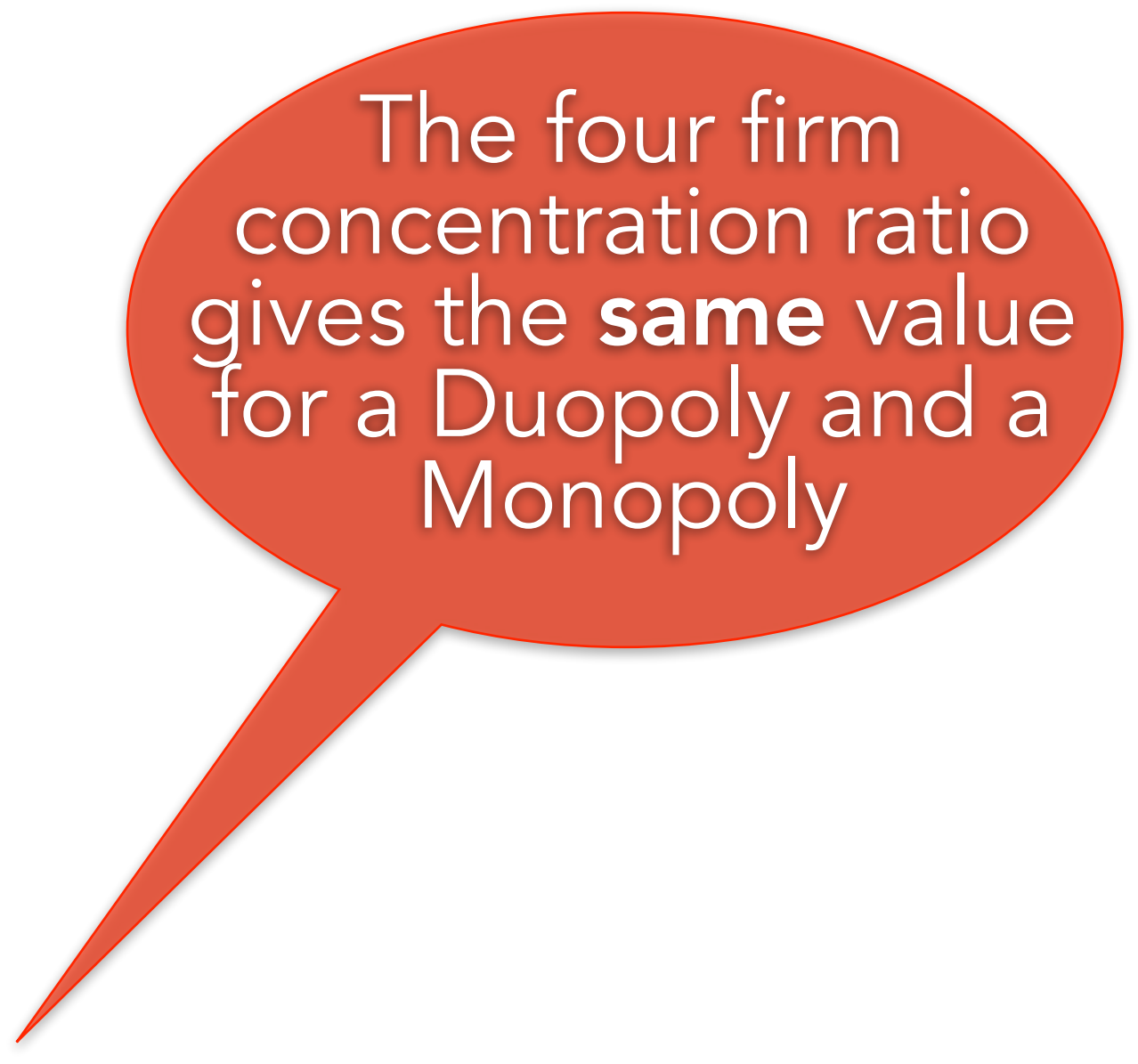
$$10{,}000 \times (0.01^2) = 1$$

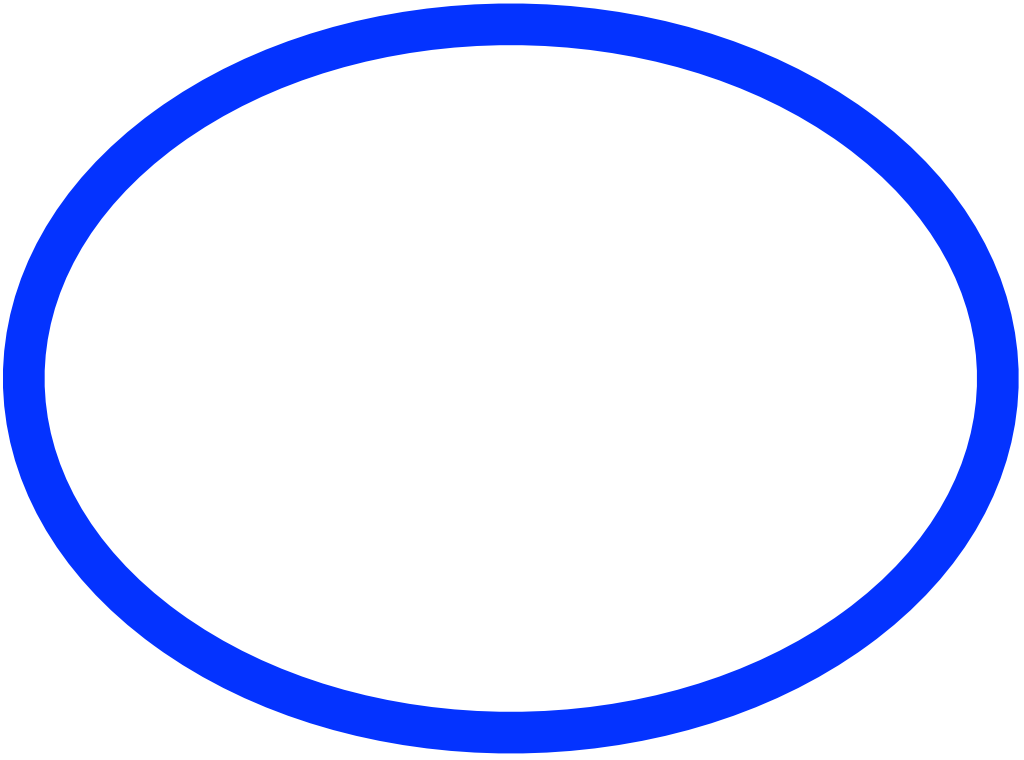
Monopoly

Duopoly

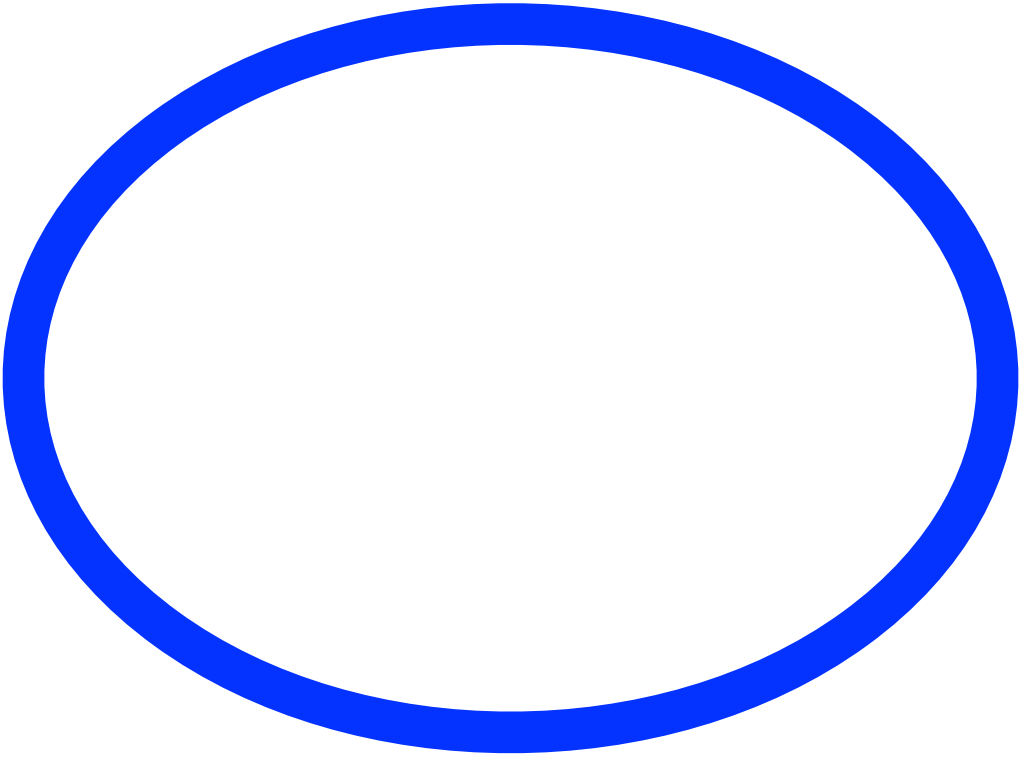
Perfect Competition




The four firm concentration ratio gives the **same** value for a Duopoly and a Monopoly



The four firm concentration ratio gives a **higher** value for a Duopoly than a Monopoly



The Herfindahl–Hirschman Index HHI is a more accurate measure of concentration

The four firm concentration ratio gives the **same** value for a Duopoly and a Monopoly

The four firm concentration ratio gives a **higher** value for a Duopoly than a Monopoly

	Number of Firms	Share of the market	4 Firm Concentration Ratio	The Herfindahl–Hirschman Index HHI
Monopoly	1	100%	100+0+0+0 = 100%	100^2 = 10,000
Duopoly	2	50%	50+50+0+0 = 100%	50^2+50^2= 2 x (50^2) = 5,000
Perfect Competition	10,000	100/10,000 =0.01%	0.01+0.01+0.01+0.01 = 0.04%	10,000 x (0.01^2) = 1

The Herfindahl–Hirschman Index HHI is a more accurate measure of concentration

A Comparison of Various Market Structures

Structure / Characteristics	Monopoly	Oligopoly	Monopolistic Competition	Perfect Competition
Number of Firms	One	Few	Many	Almost infinite
Barriers to Entry	Significant	Significant	Few	None
Pricing Decisions	$MC = MR$	Strategic pricing, between monopoly and perfect competition	$MC = MR$	$MC = MR = P$
Output Decisions	Most output restriction	Output somewhat restricted	Output restricted somewhat by product differentiation	No output restriction
Interdependence	Only firm in market, not concerned about competitors	Interdependent strategic pricing and output decision	Each firm acts independently	Each firm acts independently
Profit	Possibility of long-run economic profit	Some long-run economic profit possible	No long-run economic profit possible	No long-run economic profit possible
P* and *MC	$P > MC$	$P > MC$	$P > MC$	$P = MC$