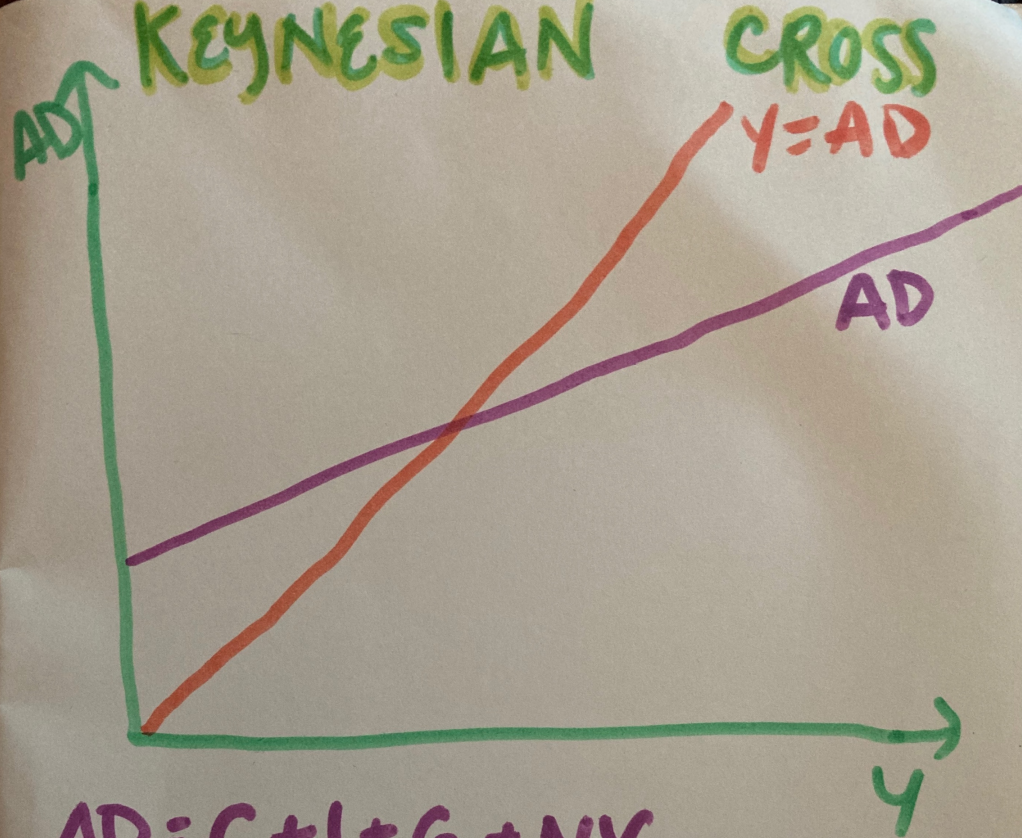


# MACROECONOMICS

ECO 201

**Week 10 – Keynesian Cross & Multipliers**

# KEYNESIAN CROSS



$$AD = C + I + G + NX$$

$$AD = Y$$

where...

$C$  = CONSUMPTION

$\bar{C}$  = AUTONOMOUS CONSUMPTION

$mpc$  = MARGINAL PROPENSITY TO CONSUME

$Y$  = income, output, real GDP

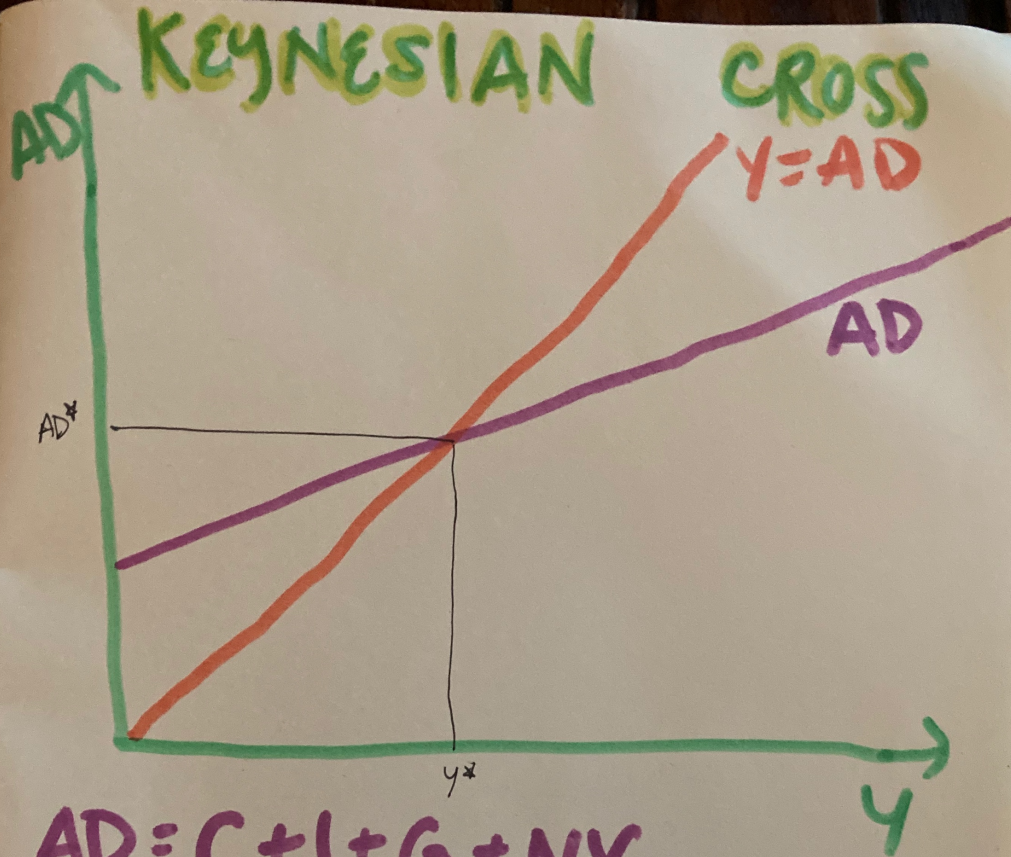
$T$  = taxes

$AD$  = AGGREGATE DEMAND

$I$  = INVESTMENT

$G$  = GOVERNMENT

$NX$  = NET EXPORTS (exports less imports)



$$AD = C + I + G + NX$$

$$AD = Y$$

equilibrium at  $(Y^*, AD^*)$  where the lines intersect.

where...

$C$  = CONSUMPTION

$\bar{C}$  = AUTONOMOUS CONSUMPTION

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$Y$  = income, output, real GDP

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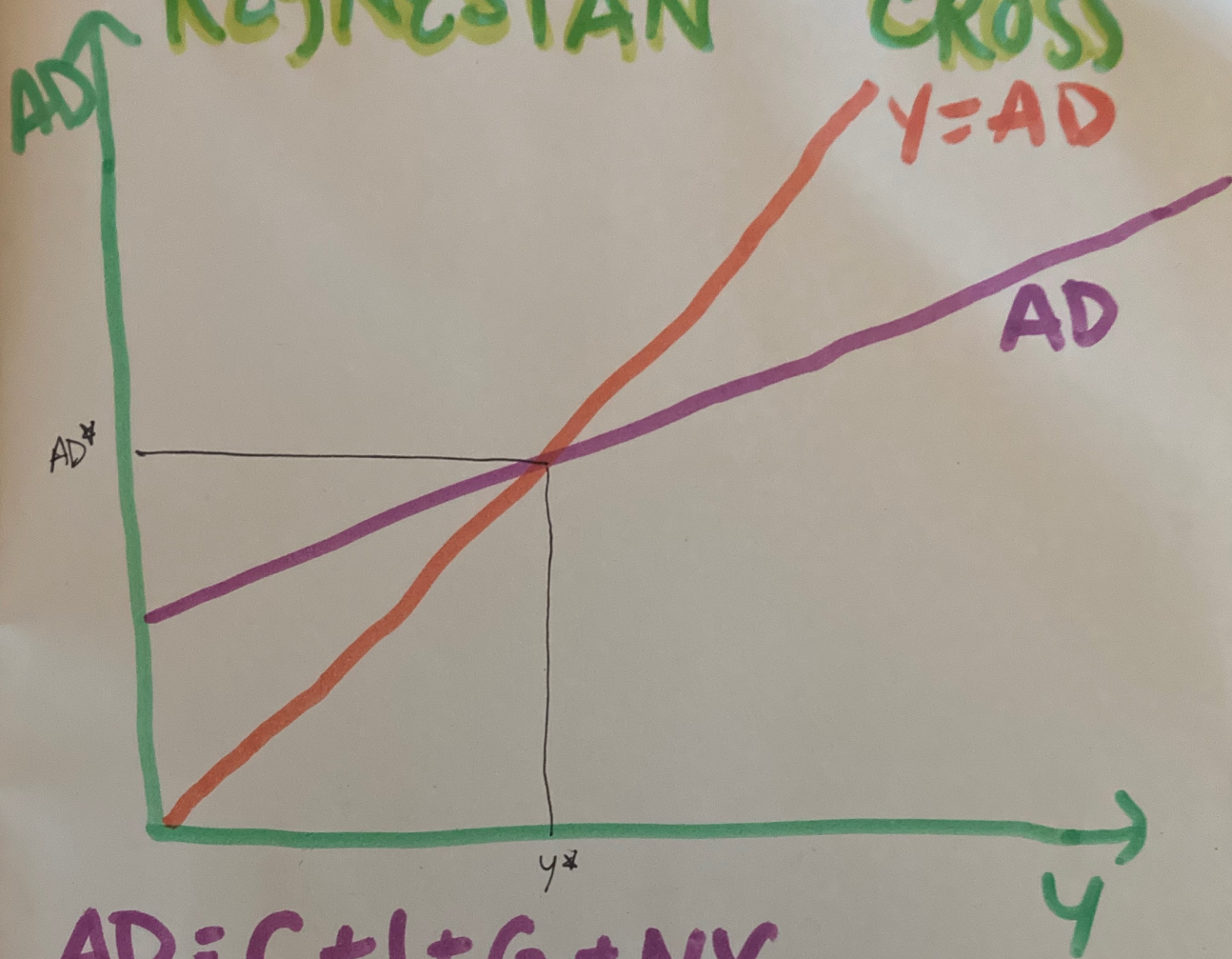
$I$  = INVESTMENT

$G$  = GOVERNMENT

$NX$  = NET EXPORTS (exports less

# KEYNESIAN

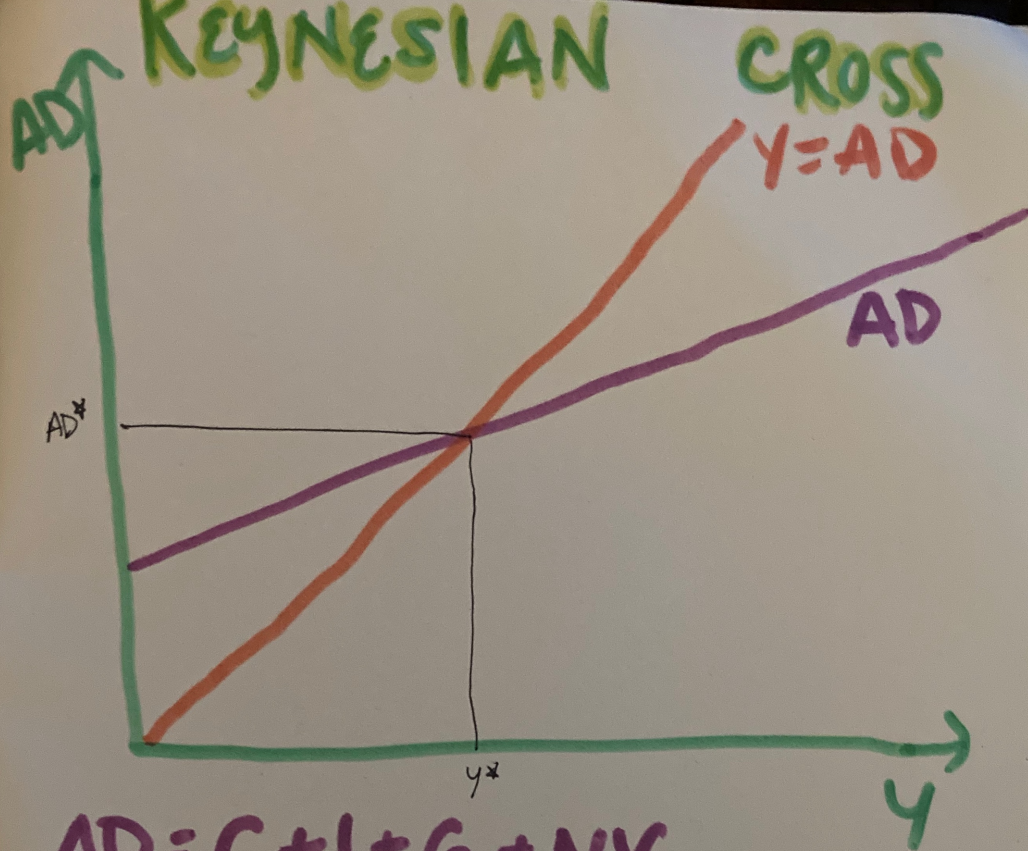
# CROSS



$$AD = C + I + G + NX$$

$$AD = Y$$

equilibrium at  $(y^*, AD^*)$  where the lines intersect. The level of economic output from which the economy will not deviate (until something else happens)

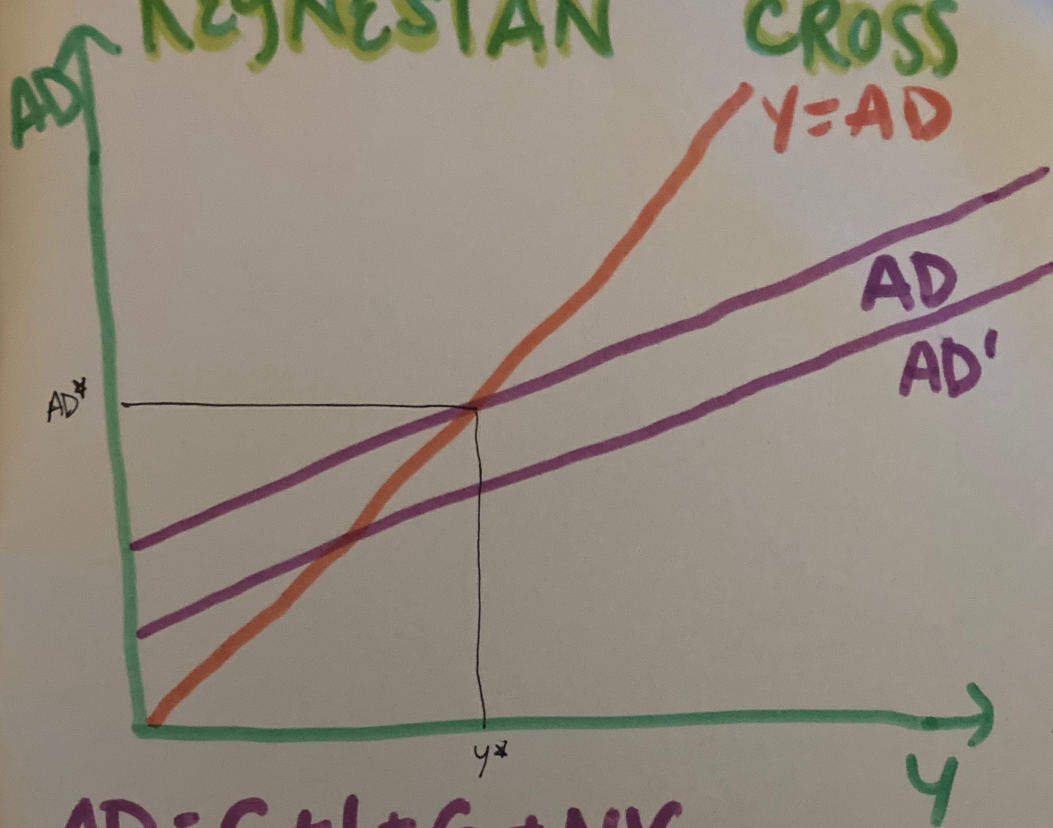


$$AD = C + I + G + NX$$

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equilibrium at  $(y^*, AD^*)$  where the lines intersect. The level of economic output from which the economy will not deviate (until something else happens)

↓  
**SHIFTS IN THE AD CURVE  
 RESULT IN CHANGES IN THE  
 ECONOMY LARGER THAN  
 THE INITIAL CHANGE**

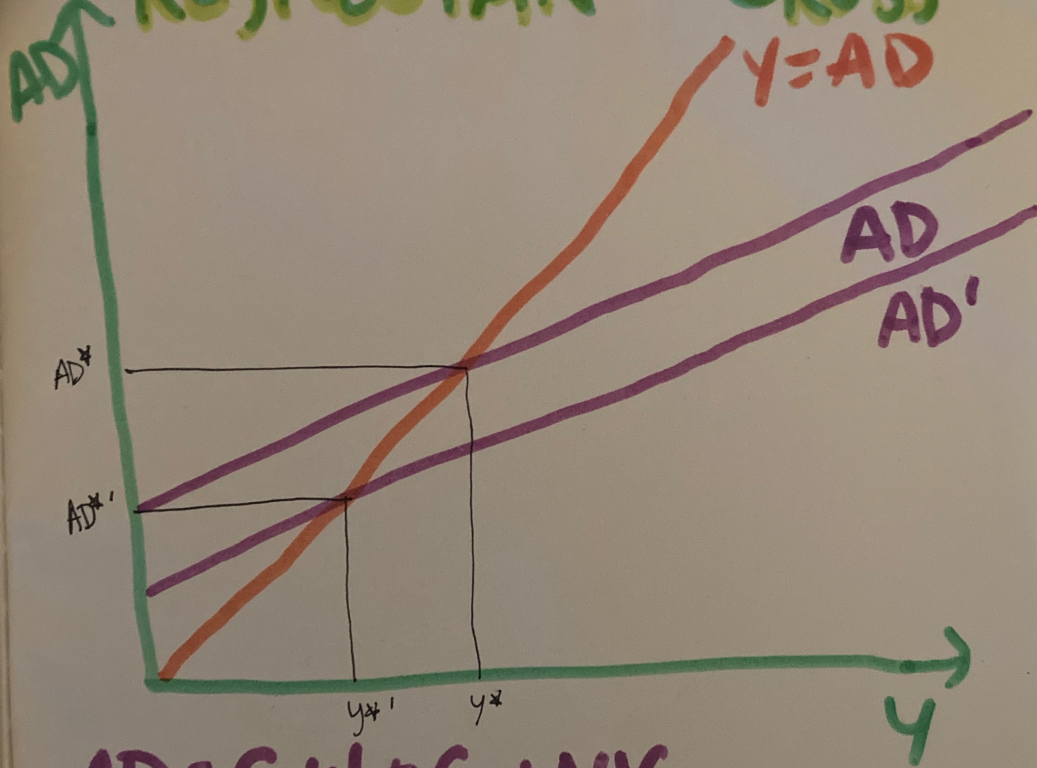


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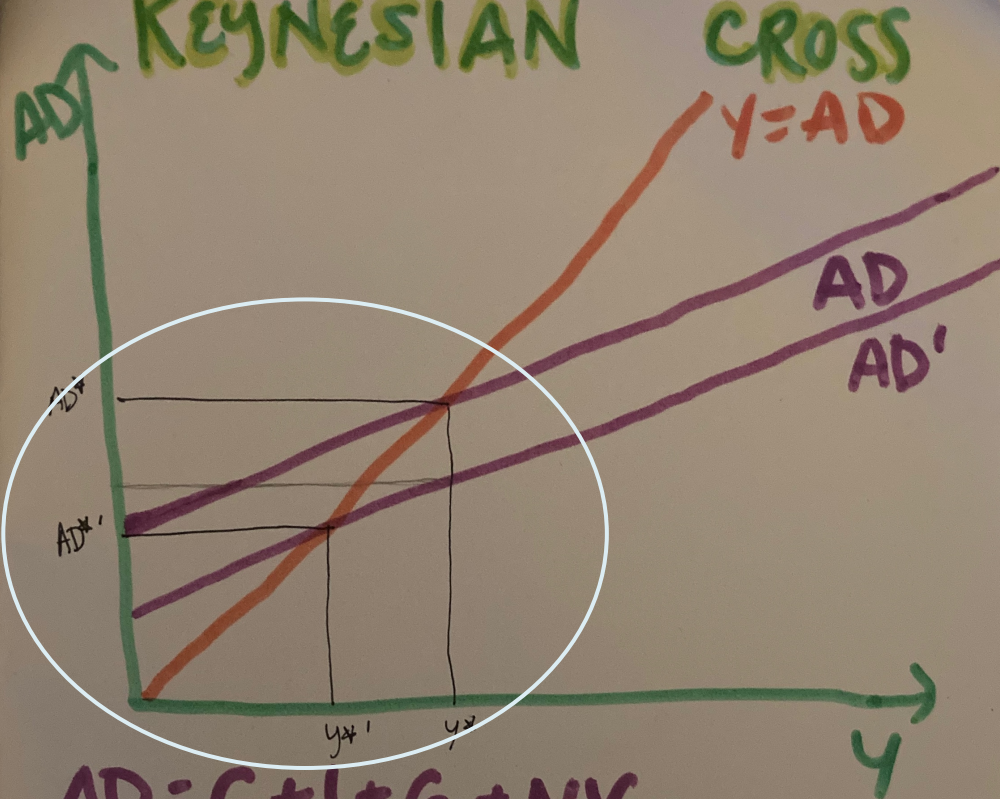
$$AD = Y$$

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↓  
**SHIFTS IN THE AD CURVE RESULT IN CHANGES IN THE ECONOMY LARGER THAN THE INITIAL CHANGE**

Following the shift of the AD curve from AD to AD', equilibrium shifts from  $(y^*, AD^*)$  to  $(y^{*1}, AD^{*1})$





$$AD = C + I + G + NX$$

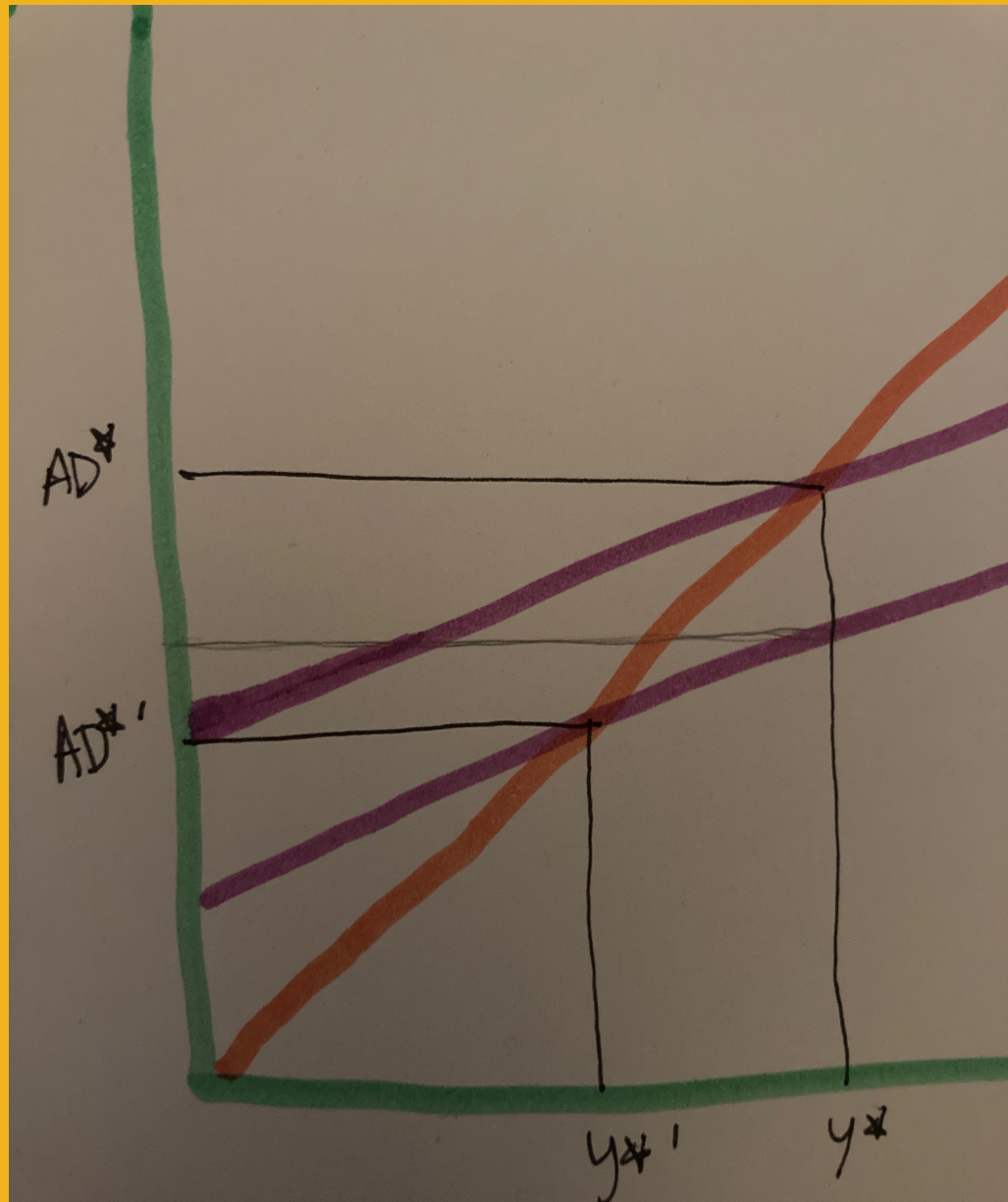
$$AD = Y$$

equilibrium at  $(y^*, AD^*)$  where the lines intersect. The level of economic output from which the economy will not deviate (until something else happens)

↓

**SHIFTS IN THE AD CURVE RESULT IN CHANGES IN THE ECONOMY LARGER THAN THE INITIAL CHANGE**

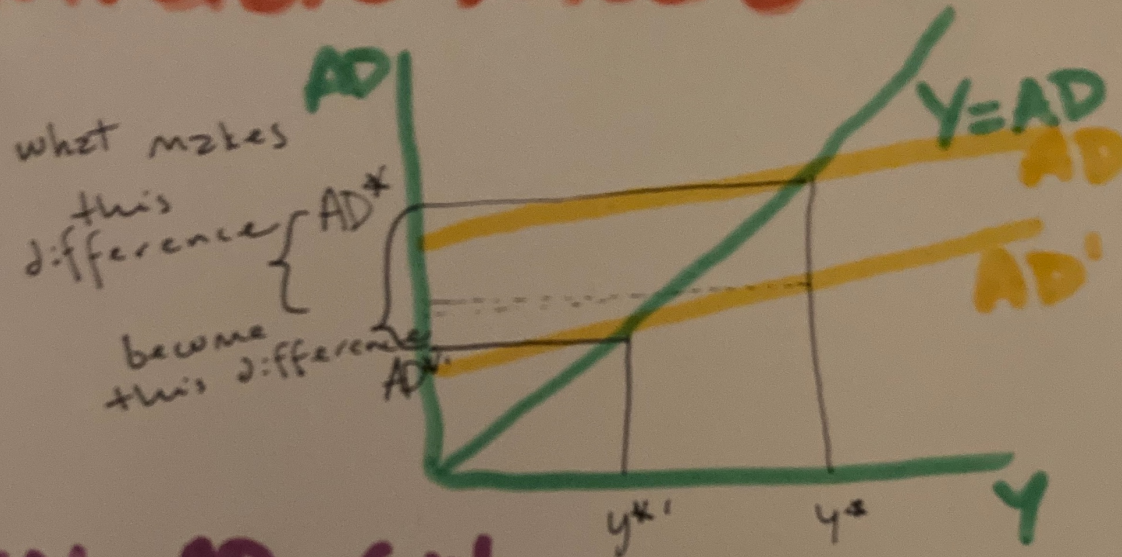
Following the shift of the AD curve from AD to AD', equilibrium shifts from  $(y^*, AD^*)$  to  $(y^{*'}, AD^{*'})$



$$AD = C + I + G + N$$

# MULTIPLIER MODEL

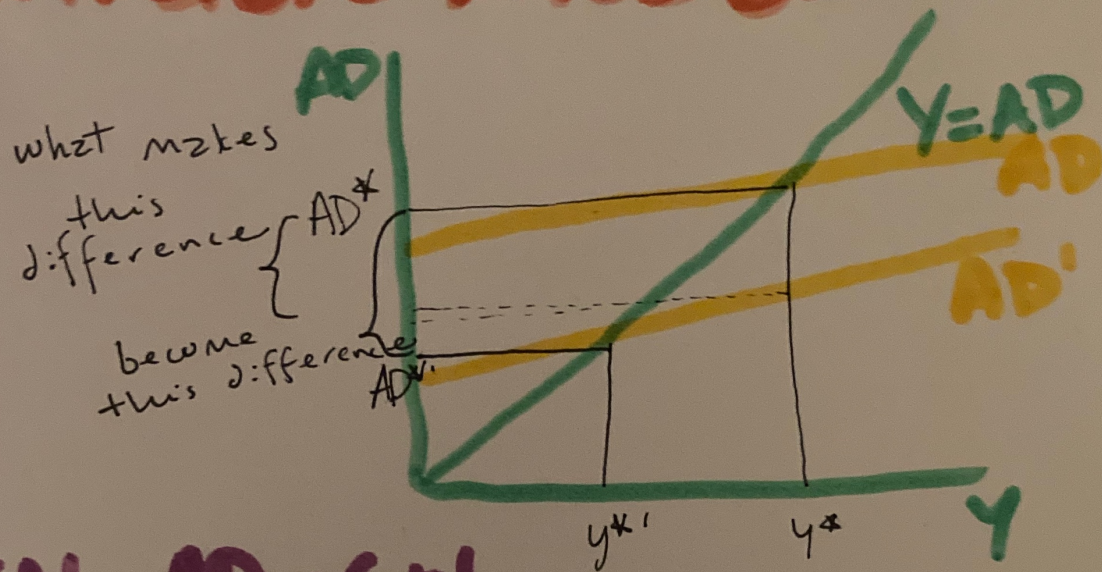
# MULTIPLIER MODEL



WHEN  $AD = C + I$

$$\Delta Y = \Delta \bar{C} ; \Delta Y = \Delta I$$

# MULTIPLIER MODEL



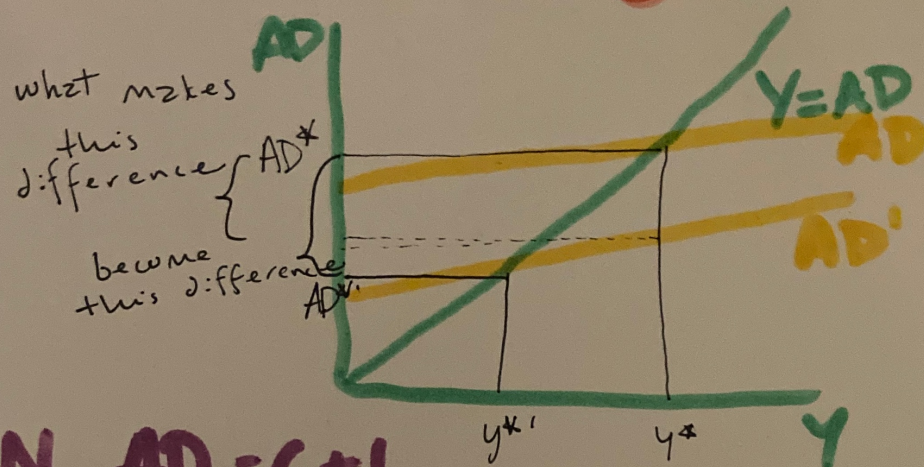
WHEN  $AD = C + I$

$$\Delta Y = \text{MULT} \Delta \bar{C} ; \Delta Y = \text{MULT} \Delta I$$

CONSUMPTION/INVESTMENT  
MULTIPLIER

$$\text{MULT} = \frac{1}{1 - \text{MPC}}$$

# MULTIPLIER MODEL



WHEN  $AD = C + I$

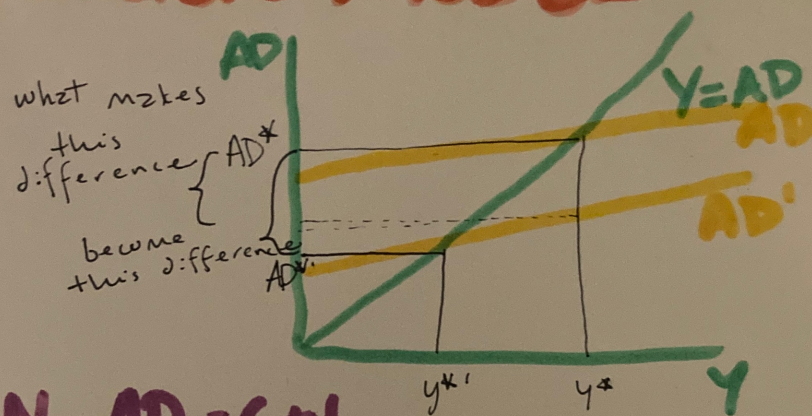
$$\Delta Y = \text{MULT} \Delta \bar{C} ; \Delta Y = \text{MULT} \Delta I$$

CONSUMPTION/INVESTMENT  
MULTIPLIER

$$\text{MULT} = \frac{1}{1 - \text{mpc}}$$

IF  $\text{mpc} = 0.6$ , what would be the effect of an increase of investment of \$50 million on equilibrium expenditure?

# MULTIPLIER MODEL



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IF  $\text{mpc} = 0.6$ , what would  
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of investment of \$50 million  
on equilibrium expenditure?

$$\begin{aligned} \Delta AD = \Delta Y &= \frac{1}{1 - 0.6} (\$50 \text{ million}) = \frac{1}{0.4} (\$50 \text{ million}) \\ &= \frac{10}{4} \cdot \$50 \text{ million} = \$125 \text{ million} \end{aligned}$$