IS-LM model cheat sheet

The model

Assumptions: closed economy, fixed price level, short run, output set by demand.

- Consumption: C = a + c(Y - T)
- Investment: I = e - dr
- Real money demand: L = kY - hr
- Goods market (IS): Y = C + I + G
- Money market (LM): M/P = L

The curves

- IS: Y = (a - cT + e + G - dr) / (1 - c)
- LM: r = (k/h)Y - M/(hP)
- Simple spending multiplier: 1 / (1 - c)
- Tax multiplier: -c / (1 - c)

What changes the slopes

Change	Effect
Bigger d	IS flatter
Bigger c	IS flatter
Bigger h	LM flatter
Bigger k	LM steeper

What shifts the curves

Shock	Curve	Output	Interest rate
G up	IS right	Up	Up
T down	IS right	Up	Up
M up	LM right	Up	Down
P up	LM left	Down	Up

Special cases

- Liquidity trap: LM flat at the lower bound. Monetary policy has no effect on output. Fiscal policy has the full multiplier, with no crowding out.
- Vertical LM: money demand doesn't respond to r. Fiscal policy is fully crowded out.

- Central bank sets r: LM is flat at the chosen rate. A fiscal expansion is crowded out only if the bank raises rates.

From IS-LM to AD

Solve IS and LM together for Y at each price level P. A higher P lowers M/P, shifts LM left and lowers Y, so AD slopes downwards.

Exam routine

1. State the assumptions.
2. Draw and label the starting equilibrium: r on the vertical axis, Y on the horizontal.
3. Shift the right curve and say why.
4. Explain the mechanism in order: shock, interest rate, investment, output.
5. Solve any numbers and substitute back to check.
6. Evaluate: slopes, liquidity trap, interest rate rules.