Private Pilot Flight Maneuvers (C172)

Normal Takeoff

Clean Configuration (no flaps)
Make appropriate radio call
Throttle full forward (max rpm)
Rotate at 70 mph
Climb out at Vy (85 mph)

Normal Landing

Power to 2100 rpm
Apply carb heat
Power to 1500 rpm
Add nose up trim as needed
Add three degrees of flaps
Begin base turn (80-85 mph)
Add more flaps if needed
Final approach (75-70 mph)
Landing (70 mph)

Short Field Takeoff

Add 10 degrees of flaps
Make appropriate radio call
Apply max back elevator pressure
Throttle full forward (max rpm)
Let nose come up
Roll down runway on just the mains
Rotate when airplane starts to lift off
Push nose down to gain airspeed
Climb out at Vy (85 mph)

Short Field Landing

Power to 2100 rpm
Apply carb heat
Power to 1500 rpm
Add nose up trim as needed
Add three degrees of flaps
Begin base turn (70-75 mph)
Add more flaps if needed
Final approach (65-70 mph)
Land on preselected spot

Soft Field Takeoff

Clean Configuration (no flaps)
Make appropriate radio call
Throttle full forward (max rpm)
Hold brakes until green arc
Let go of brakes
Rotate at 70 mph
Climb out at Vx (70 mph)

Soft Field Landing

Power to 2100 rpm
Apply carb heat
Power to 1500 rpm
Add nose up trim as needed
Add three degrees of flaps
Begin base turn (80-85 mph)
Add more flaps if needed
Final approach (75-70 mph)
Hold nose up; land on mains

Steep Turns

Perform 180 degree clearing turn
Pick ground reference point (lake, road, etc)
Start power - 2300 rpm
Roll into 45 degree bank
Advance throttle about 100-200 rpm
Add nose up trim as needed
Keep coordinated with rudders
Roll wings level when reaching visual ref point.

Turns Around a Point

Begin maneuver at 600-1000'
Maintain constant radius

Slow Flight

Select altitude at least 1500' AGL
Perform clearing turn
Power to 2100 rpm
Apply carb heat
Power to 1500 rpm
Add nose up trim as needed
Add full flaps in increments
Advance throttle to maintain (65 mph)

PITCH FOR AIRSPEED
POWER FOR ALTITUDE

Power Off Stall

Select altitude at least 1500'
Perform clearing turn
Power to 2100 rpm
Apply carb heat
Power to 1500 rpm
Add nose up trim as needed
Add full flaps in increments
At 65-70 mph, start descent
Pull up until stall

To Recover:

Break the AOA
Full power
Reduce flaps in increments

Power on Stall

Clean Configuration
Slow airplane to 65-70 mph
Apply full power
Pitch up until stall
Break AOA
Recover to cruise flight

Upset Attitude Recovery

In the brown, power down
In the blue, power through

Engine Fire in Flight

(electrical fire)
Master Switch – OFF
All Electrical Switches – OFF
Land as soon as possible
Use fire extinguisher if available

(engine fire)
Establish an Emergency Descent
Pitch for bottom of yellow arc
Look for a place to land
Fuel Selector – OFF
Primer – in and locked
Throttle – closed
Mixture – idle cut-off
Make emergency landing

Engine Failure in Flight

Establish best glide
Look for best place to land
Attempt restart if time
Make emergency radio calls

(If no restart)

Fuel Selector – OFF
Mixture – idle cut-off
Magnetos – OFF
Master Switch – OFF
Seatbelts – secure
Door – unlatched