

■ GSAP Fast Revision Cheatsheet

1. Core GSAP Methods

```
gsap.to("#box", { x: 200, y: 100, duration: 1, opacity: 1 });
gsap.from("#box", { x: -200, opacity: 0, duration: 1 });
gsap.fromTo("#box", { x: -100, opacity: 0 }, { x: 200, opacity: 1, duration: 1 });
```

2. Important Properties

Transforms: x, y, scale, rotate, skew
Opacity & Colors: opacity, backgroundColor, color
CSS: width, height, borderRadius
Special: repeat, yoyo, stagger, delay, ease

3. Easing

```
ease: "power1.out"
ease: "power2.inOut"
ease: "bounce.out"
ease: "elastic.out(1, 0.3)"
```

4. Timeline

```
let tl = gsap.timeline({ repeat: 2, yoyo: true });
tl.to("#box", { x: 200, duration: 1 })
  .to("#box", { y: 100, duration: 1 })
  .to("#box", { rotate: 360, duration: 1 });
```

5. Stagger

```
gsap.to(".circle", { x: 200, duration: 1, stagger: 0.2 });
stagger: { each: 0.2, from: "center" }
```

6. ScrollTrigger (Plugin)

```
gsap.registerPlugin(ScrollTrigger);
gsap.to("#box", {
  x: 400,
  duration: 2,
  scrollTrigger: {
    trigger: "#box",
    start: "top 80%",
    end: "top 20%",
    scrub: true,
    pin: true,
    markers: true
  }
});
```

7. Key Features

repeat: -1 → infinite loop
yoyo: true → reverse animation
duration: seconds
delay: wait before start
onComplete: callback

8. Advanced GSAP

Keyframes:
gsap.to("#box", {
 keyframes: [
 { x: 100, duration: 1 },
 { y: 100, duration: 1 },
 { rotate: 360, duration: 1 }
]
});

GSAP Utils:
gsap.utils.random(0, 500);
gsap.utils.wrap(["red", "blue", "green"]);

9. Best Practices

- ✓ Use transform (x, y, scale, rotate) for performance
- ✓ Use timeline for sequencing
- ✓ Use stagger for multiple elements
- ✓ Use ScrollTrigger for scroll animations