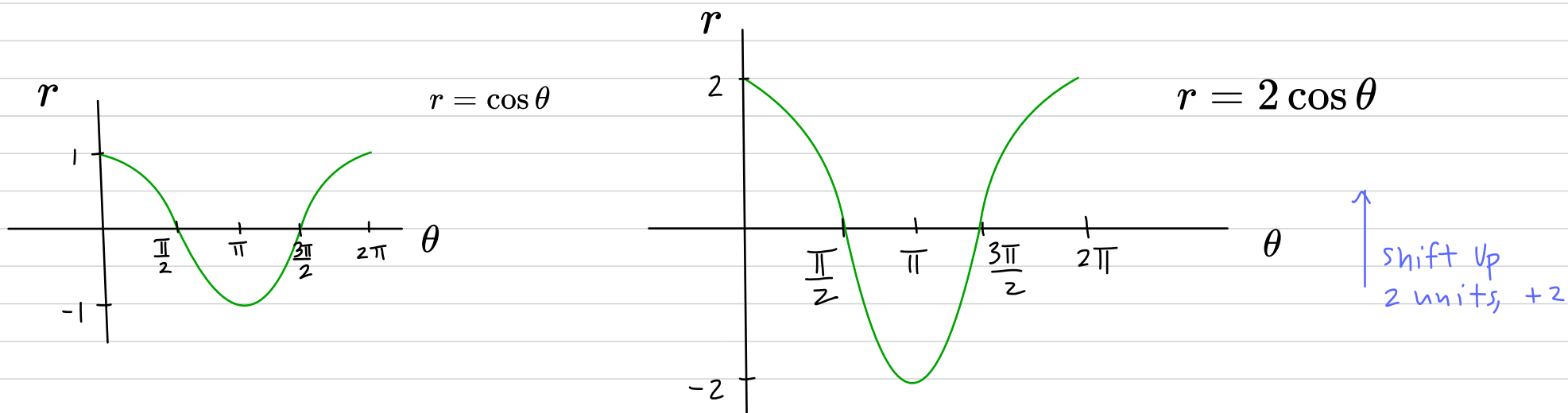


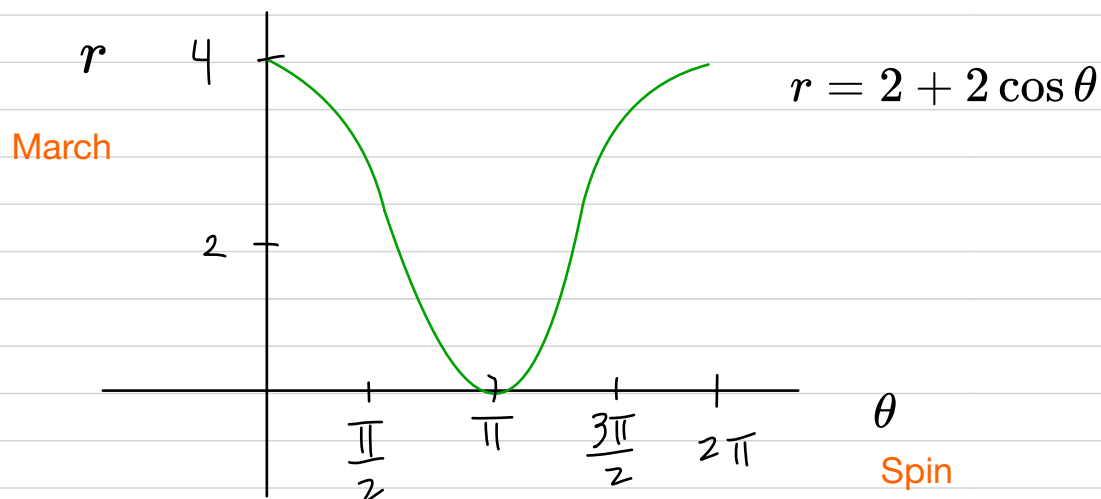
Polar Coordinate Sketching

Cardioids

Ex: Use the Cartesian Plot to Sketch the Polar Curve $r = 2 + 2 \cos \theta$

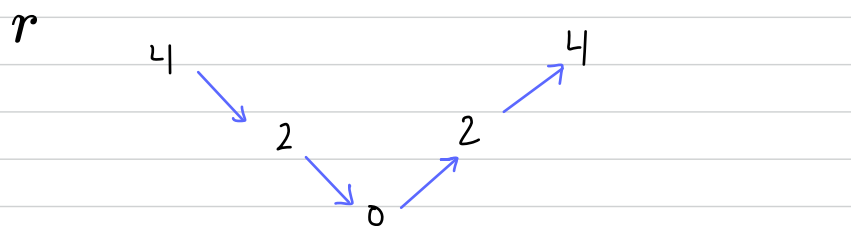


Cartesian Plot

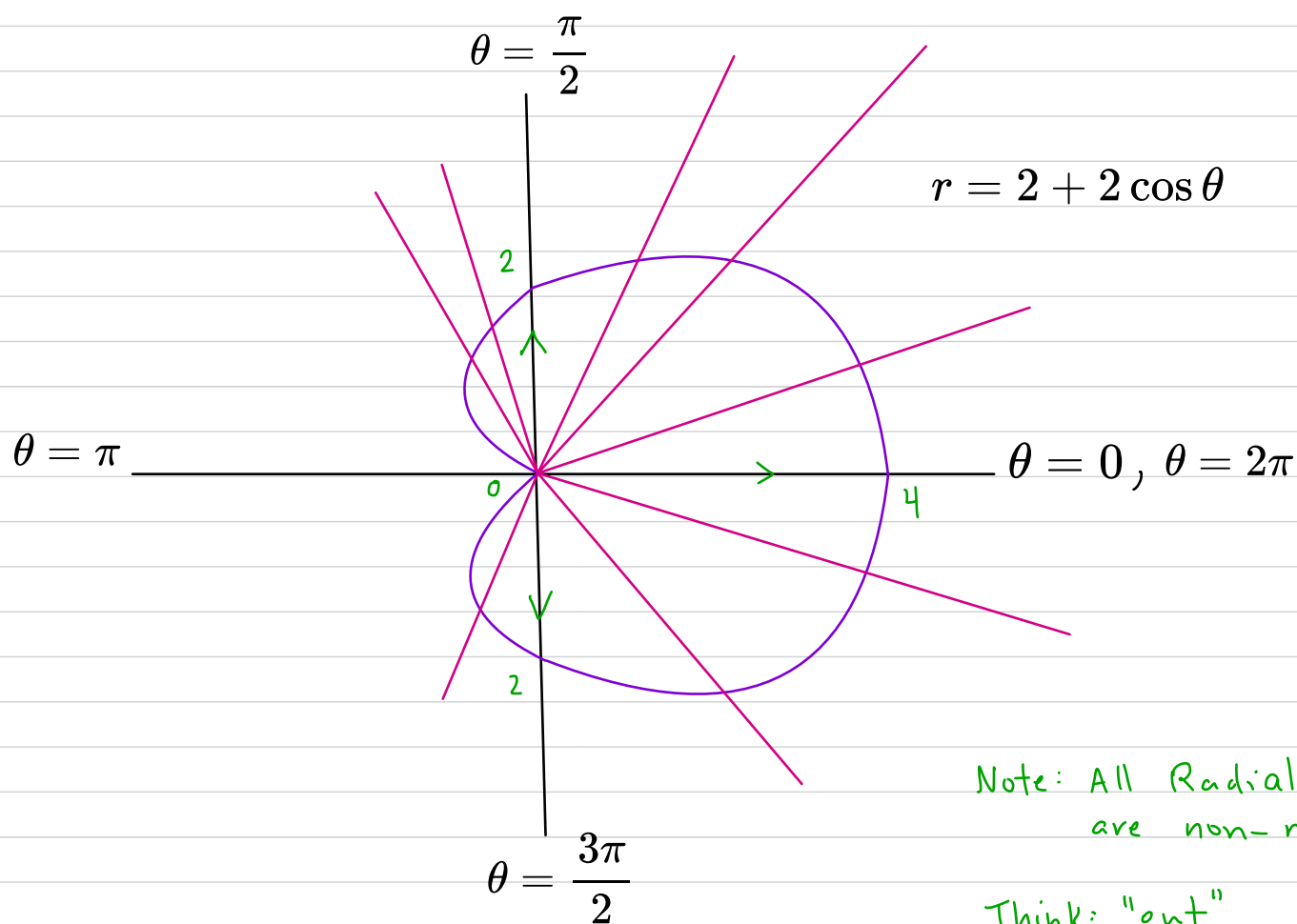


Optional point plot

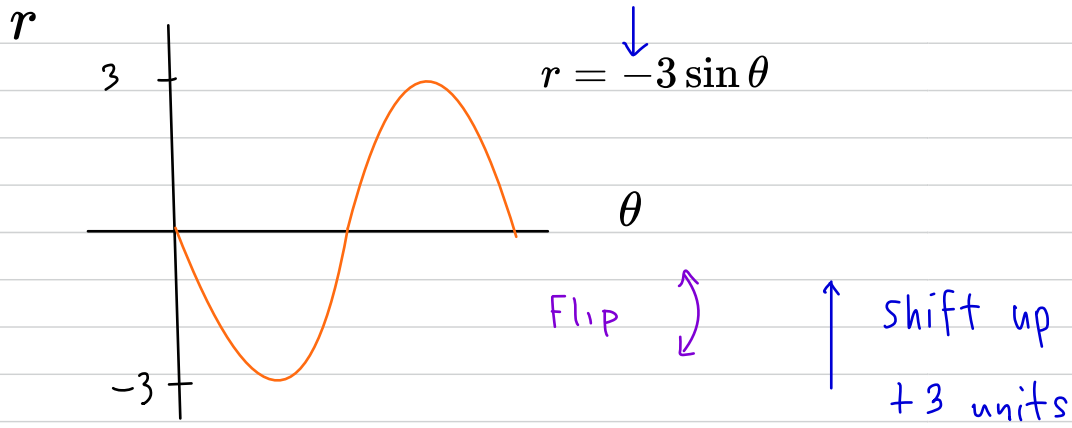
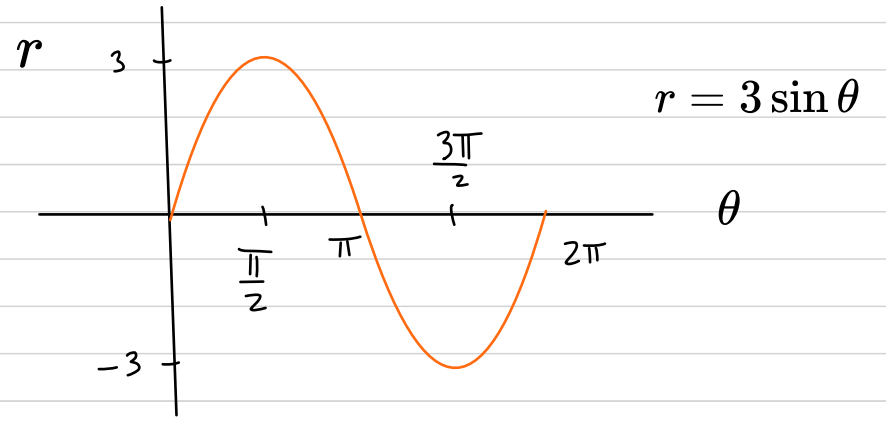
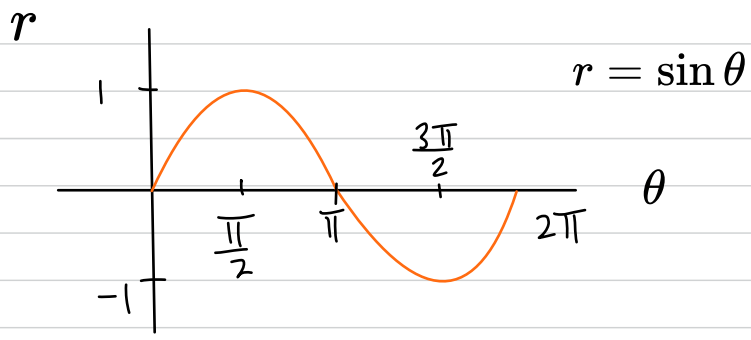
| θ | r |
|------------------|----------|
| 0 | 4 |
| $\frac{\pi}{2}$ | 2 |
| π | 0 |
| $\frac{3\pi}{2}$ | 2 |
| 2π | 4 |
| \vdots | \vdots |



Polar Plot



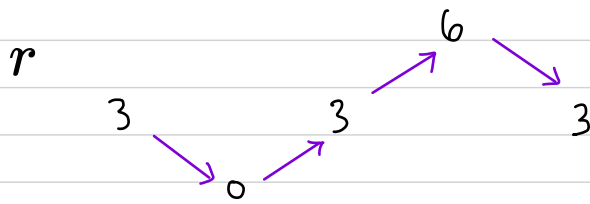
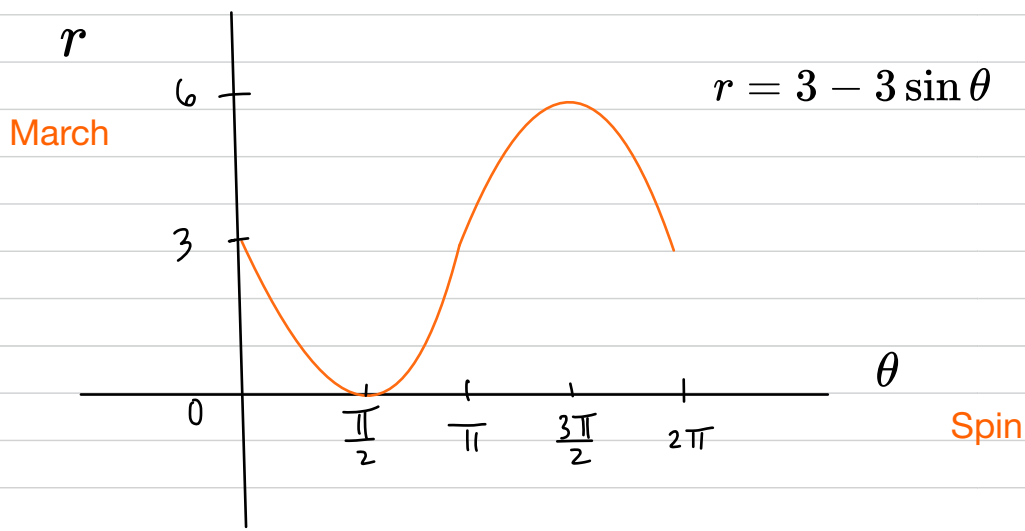
Ex: Use the Cartesian Plot to Sketch the Polar Curve $r = 3 - 3 \sin \theta$



Optional point plot

| θ | r |
|------------------|----------|
| 0 | 3 |
| $\frac{\pi}{2}$ | 0 |
| π | 3 |
| $\frac{3\pi}{2}$ | 6 |
| 2π | 3 |
| \vdots | \vdots |

Cartesian Plot



Polar Plot

