Right Hand Rules

Magnetic dipole moment
Fingers point in direction of positive current and thumb points in the direction of $\mu$ (magnetic dipole moment)

Current in straight wire
Thumb in direction of current, fingers point in direction of magnetic field

Current in a loop (circle, square, rectangle)
Fingers direction of current, thumb points in direction of B-field

Current is a solenoid
Fingers direction of current, thumb points in direction of B-field

Current in a toroid
Fingers direction of current, thumb points in direction of B-field

Ampere’s Law
Pick direction for B-field and integration path
Fingers in direction of integration path, thumb is direction for positive current

Lentz’s Law
Flux decreasing – thumb in direction of original B-field, fingers point in direction of induced current
Flux increasing – thumb opposite to direction of original B-field, fingers point in direction of induced current

Changing Electric field
\[ \frac{dE}{dt} > 0 \text{  current in direction of } E \]
\[ \frac{dE}{dt} < 0 \text{  current opposite to direction of } E \]