It's Always the Same:

$$\frac{1}{S}+\frac{1}{S'}=\frac{1}{f} \qquad M=-\frac{S'}{S}$$

You just have to keep the signs straight:

s' is positive for a real image

f is positive when it can produce a real image

Lens sign conventions

S: positive if object is "upstream" of lens

S' : positive if image is "downstream" of lens

f: positive if converging lens

Mirrors sign conventions

S: positive if object is "upstream" of mirror

S': positive if image is "upstream" of mirror

f: positive if converging mirror (concave)