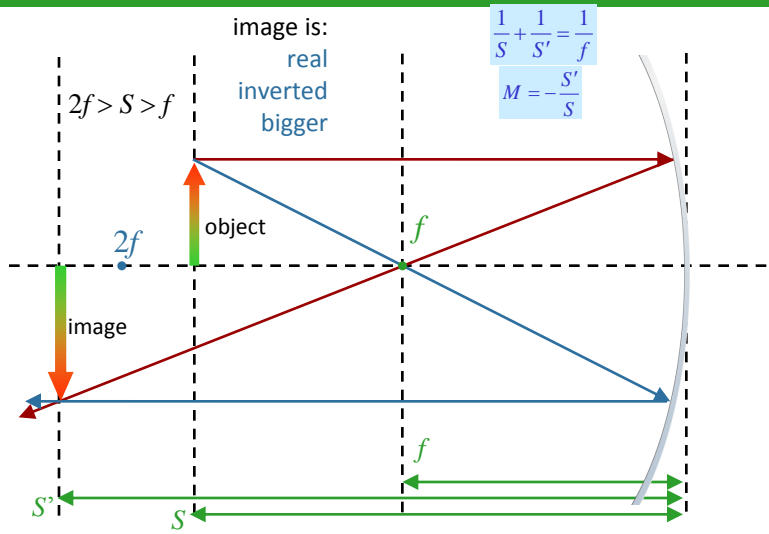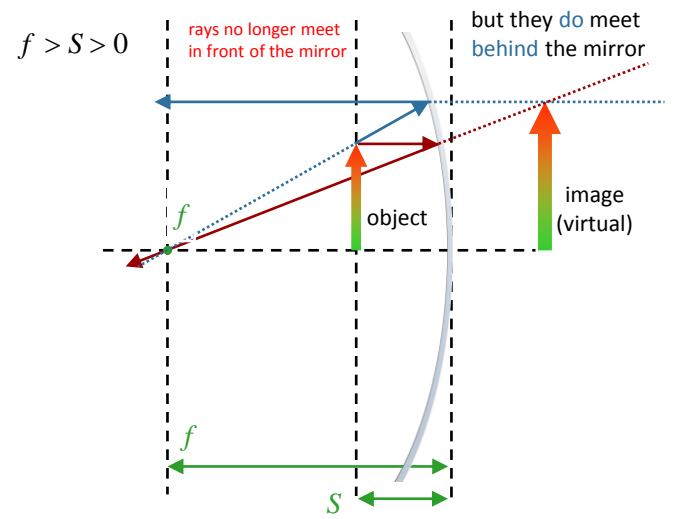The image produced by a concave mirror of a real object is
A. Always upright
B. Always inverted
C. Sometimes upright & sometimes inverted

image is:
real
inverted
bigger

$$\frac{1}{S} + \frac{1}{S'} = \frac{1}{f}$$

$$M = -\frac{S'}{S}$$

$2f > S > f$

$2f$

object

f

image

f

S'
S

$f > S > 0$

rays no longer meet
in front of the mirror

but they do meet
behind the mirror

f

object

image
(virtual)

f

S

If the object is farther than focal length it will reflect an inverted image.

If the object is closer than focal length it will produce a virtual upright image.

Images from Mirrors: Question 1 (N = 800)

% of Students

60 — 55.4 (C)

40

30.6 (B)

20

14 (A)

0

A B C