Answer on Question #43967-Physics-Optics

A CLOCK HAVING MARKS INSTEAD OF NUMBERS ON ITS DIAL APPEARS TO INDICATE 4.35 WHEN VIEWED THROUGH A MIRROR.WHAT IS THE CORRECT TIME?

Answer

If a mirror is opposite to a clock, the time 4.35 now would be 7.20.

A MAN IS RUNNING AWAY FROM A PLANE MIRROR AT THE RATE OF 10 m/s. WITH WHAT SPEED IS HE RECEDING FROM HIS OWN IMAGE?

Answer

The speed of a man relative to his image is equal the sum of speed of a man relative to a mirror and speed of a mirror relative to image. These speeds are equal, so

$$v_{\text{man-image}} = v_{\text{man-mirror}} + v_{\text{mirror-image}} = 10\,\frac{\text{m}}{\text{s}} + 10\,\frac{\text{m}}{\text{s}} = 20\,\frac{m}{s}.$$