

For a system with input  $x$  and output  $y$ , described by differential equation

$$\dot{x} + x = y$$

what is the system's Transfer function?

(a)  $\frac{s+1}{s}$

(b)  $\frac{1}{s^2+3s+2}$

(c)  $\frac{1}{s+1}$

(d)  $\frac{1}{s+s}$

(e) None of the above