

$$\begin{aligned}
 & \boxed{2/4} \quad s = (-2 + 3t)e^{-0.5t} \\
 v &= \frac{ds}{dt} = 3e^{-0.5t} + (-2 + 3t)(-0.5)e^{-0.5t} \\
 &= \underline{(4 - 1.5t)e^{-0.5t}} \\
 a &= \frac{dv}{dt} = -1.5e^{-0.5t} + (4 - 1.5t)(-0.5)e^{-0.5t} \\
 &= \underline{(-3.5 + 0.75t)e^{-0.5t}} \\
 a = 0 &: (-3.5 + 0.75t)e^{-0.5t} = 0, \quad \underline{t = 4.67 \text{ s}}
 \end{aligned}$$

