

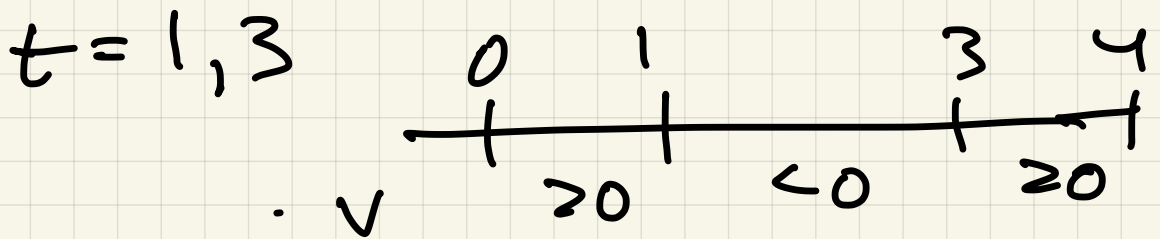
Quiz 13

Position is $s(t) = t^3 - 6t^2 + 9t$ for
 $0 \leq t \leq 4$.

1. Displacement = $s(4) - s(0)$
 $= 64 - 96 + 36 - 0 = 4 \text{ cm}$

2. $v(t) = 3t^2 - 12t + 9$

3. $v(t) = 3(t^2 - 4t + 3)$
 $= 3(t-1)(t-3) = 0$ when



changes direction at $t = 1, 3$

4. $(s(1) - s(0)) + (s(1) - s(3)) + (s(4) - s(3))$
 $= 4 + 4 + 4 = 12 \text{ cm}$