

Calculus AB Review
Calculator Active

Name _____

Given its position with respect to time, find when the velocity is zero, positive, and negative, when the acceleration is zero, positive, and negative (draw the sign lines), distance traveled, displacement, and when the particle is speeding up or down. Write complete equations and give short answers, but accurate.

$$s(t) = t^3 - 6t^2, \quad [0, 7]$$

No calculator for this part. Show all work and complete sign lines:

a)₄ Velocity: **Work** **Sign line**

b)₃ Acceleration: **Work** **Sign line**

c)₄ Speeding up & justification:

d)₃ Slowing down & justification:

For the last to parts write the complete equation and use your calculator.

e)₃ Distance traveled by the particle:

f)₃ Particle's displacement: