Evaluate \[ \int_C x \, ds \] where \( C \) is

1. The straight line segment \( x = t, y = t/2 \) from \((0, 0)\) to \((4, 2)\).
2. The parabolic curve \( x = t, y = t^2 \) from \((0, 0)\) to \((4, 2)\).
Name ____________________________