$\therefore F(M) = A(x_p+1) + B(y_p - \frac{1}{2}) + C$

$\therefore F(M_E) = F(x_p+2, y_p - \frac{1}{2})$

$= A(x_p+2) + B(y_p - \frac{1}{2}) + C$

$\therefore F(M_{SE}) = F(x_p+2, y_p - \frac{3}{2})$

$= A(x_p+2) + B(y_p - \frac{3}{2}) + C$

We know,

$d_{init} = F(M) - F(P)$

$= A(x_p+1) + B(y_p - \frac{1}{2}) + C - Ax_p - By_p - C$

$= Ax_p + A + By_p - \frac{B}{2} + C - Ax_p - By_p - C$

$= A - \frac{B}{2}$

$= dy + \frac{dx}{2}$ $[\because A = dy \text{ and } B = -dx]$

Again, $d_E = F(M_E) - F(M)$

$= A(x_p+2) + B(y_p - \frac{1}{2}) + C - A(x_p+1) - B(y_p - \frac{1}{2}) - C$

$= Ax_p + 2A - Ax_p - A$

$= A$

$= dy$ $[\because A = dy]$

And, $d_{SE} = F(M_{SE}) - F(M)$

$= A(x_p+2) + B(y_p - \frac{3}{2}) + C - A(x_p+1) - B(y_p - \frac{1}{2}) - C$

$= Ax_p + 2A + By_p - \frac{3B}{2} - Ax_p - A - By_p + \frac{B}{2}$

$= A - B$

$= dy + dx$ $[\because A = dy \text{ and } B = -dx]$

$\therefore d_{init} = 2dy + dx$

$\therefore d_E = 2dy$

$\therefore d_{SE} = 2dy + 2dx$