Forecast factory worksheet

$$T_{future} = T - \left(\frac{\Delta t}{\Delta x} \times \left\{ \left(u \times \left[T - T_{west} \right] \right) + \left(v \times \left[T_{north} - T \right] \right) \right\} \right)$$

Constants: Time-step (Δt) = 3600s, Grid-spacing (Δx) = 100,000m (100km)
T is the temperature at your location at the current time

My grid box number is: ____

TIMESTEP 1

$\frac{\Delta t}{\Delta x}$ = A

u x (T – T west) = B

v x (T north – T) = C

T – { A x (B + C) } = T future

TIMESTEP 2

$\frac{\Delta t}{\Delta x}$ = A

u x (T – T west) = B

v x (T north – T) = C

T – { A x (B + C) } = T future

TIMESTEP 3

$$\frac{\Delta t}{\Delta x} = A$$

$$u \times (T - T_{west}) = B$$

$$v \times (T_{north} - T) = C$$

$$T - \{A \times (B + C)\} = T_{future}$$

TIMESTEP 4

$$\frac{\Delta t}{\Delta x} = A$$

$$u \times (T - T_{west}) = B$$

$$v \times (T_{north} - T) = C$$

$$T - \{A \times (B + C)\} = T_{future}$$