Solve the problems on the p-h chart

Example 1 :

For a simple refrigeration cycle represented by p – h chart below if

h1= 330 kJ/kg   h2= 355 kJ/kg   And h3= 225 kJ/kg

Calculate the following:

1. Refrigeration Effect (R.E)
2. Work Done (W.D)
3. Coefficient of Performance (C.O.P)

Solution:

R.E = h1 – h4   R.E = [ ] – [ ] = [ ] kJ/kg

W.D = h2 – h1   W.D = [ ] – [ ] = [ ] kJ/kg

C.O.P = RE / WD   C.O.P = [ ] / [ ] = [ ]

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h3 = h4   h1 h2

Enthalpy - Enthalpie (kJ/kg)