Step 1; determine the size of the field
Step 2; determine the bulk density of the soil (just for fun. Not necessary for calculations)
Step 3; determine the volumetric water content before and after irrigation
Step 4; calculate the volume of water stored in the soil profile.
Step 5; calculate the volume of water that was applied by the sprinklers
Step 6; Total Runoff - Infiltration - Interception = Direct Runoff
Step 7; calculate interception

Ad 1) The size of the field can be calculated by looking at the direct runoff and the effective precipitation. [The difference between the applied precipitation and the effective precipitation is a result of infiltration and interception].

The area under the hydrograph for direct runoff is 400 m³
The area under the hydrograph for effective ppt is 2 cm

\[ d = \frac{V}{A} \rightarrow A = \frac{V}{d} \rightarrow 400/0.02 = 20,000 \text{ m}^2 = 20 \text{ ha} \]

Ad 2) Bulk density is the dry weight over the volume of the sample. Bulk density is thus

\[ \frac{100}{85} = 1.18 \text{ g/cm}^3 \]. Porosity is then 1 - 1.18/2.65 = 0.55.

Ad 3) Volumetric water content before irrigation is 30 g water/85 cm³ = 0.35
Or: (30 gr water/100 gr soil) * ([1.18 g soil/cm³]/[1.0 g water/cm³] = 0.35

After irrigation, the volumetric water content is

43 g water / 85 cm³ = 0.51 cm³ water per cm³ bulk soil

Ad 4) The difference between final and initial water content = 0.51 - 0.35 = 0.16 [-]
This difference of water content was measured over a volume of soil of

\[ 20,000 \text{ m}^2 \times 0.25 \text{ m} = 5000 \text{ m}^3 \]. The volume of water stored in the soil is then

5000 * 0.16 = 800 m³

Ad 5) A volume of 6 hours * 1 cm/hr * 20,000 m² = 1200 m³ was applied.

Ad 7) The interception is then:

1200 m³ applied - 400 m³ runoff - 800 m³ infiltration = 0 m³ interception