

hw-1

An engineering firm is constructing power plants at three different sites. Define the events  $E_1$ ,  $E_2$ , and  $E_3$  as follows:

$E_1$  the plant at site 1 is completed by the contract date.

$E_2$  the plant at site 2 is completed by the contract date.

$E_3$  the plant at site 3 is completed by the contract date.

Draw a Venn diagram that depicts these three events as intersecting circles. Shade the region on the Venn diagram corresponding to each of the following events (redraw the Venn diagram for each question):

a. At least one plant is completed by the contract date.

b. All plants are completed by the contract date.

c. None of the plants is completed by the contract date.

d. Only the plant at site 1 is completed by the contract date.

e. Exactly one of the three plants is completed by the contract date.

f. Either the plant at site 1 or site 2 or both of the two plants are completed by the contract date.

