

Kent County plans to develop several new recreational facilities that must be completed within the \$3.5-million budget. A survey of county residents has given information about the type of facilities that county residents would like to see built. The information is described in the following table. Specifically, this table provides the cost to construct and maintain each facility, the acres each facility will require, and the average monthly use of each facility. The county has decided that at least 15 facilities will be built and has set aside 55 acres for construction.

Facility	Cost per Facility	Acres per Facility	Use in People per Month	Annual Maintenance
Basketball Courts	\$300,000	3	700	\$3,000
Baseball Fields	\$250,000	5	1,000	\$6,000
Playgrounds	\$75,000	2	800	\$3,000
Soccer Fields	\$175,000	3	1,200	\$7,000

The county has also established the following list of prioritized goals:

P1: The county would like to spend the entire budget.

P2: The county would like to build enough facilities so that 15,000 people or more each month can use them.

P3: The county does not want to use more than the 55 acres set aside for the project.

P4: The county does not want to spend more than \$80,000 per year on maintenance costs for the new facilities.

How many of each type of facility should be constructed?