Uvas Canyon County Park

is a county park at the border of San Jose and Morgan Hill.

The Gonzales is planning to go to the Uvas Canyon County Park for camping as the family reunion at the beginning of this summer for 3 nights. Johnny Gonzales who attends EVHS is the family recreation planner this year for the whole family. According to a preliminary survey, there are going to be 13 adults and 21 minors to join the event. Moreover, they prepare to carpool and take 8 vehicles to the site. As a recreation planner, Johnny is responsible for several tasks:

Task 1: Decide the Costs for the Tent

Since Gonzales is a big family, they would like to know how much they are going to spend over the reunion. Here is some fees that Johnny researches ahead of the time,

Tent:

Tent types	Adults	Minors	Reservation fee	Cost per night
Standard	2	3	$5	$50
Igloo	1	2	$7	$20

Campground:

reservation fee	use (per car per night)	special maintenance fee (per site per night)
$8	$24	$2

1.1 If they stay X nights, write an expression to represent the cost for renting a Standard tent.

1.2 If they stay X nights, write an expression to represent the cost for renting an Igloo tent.

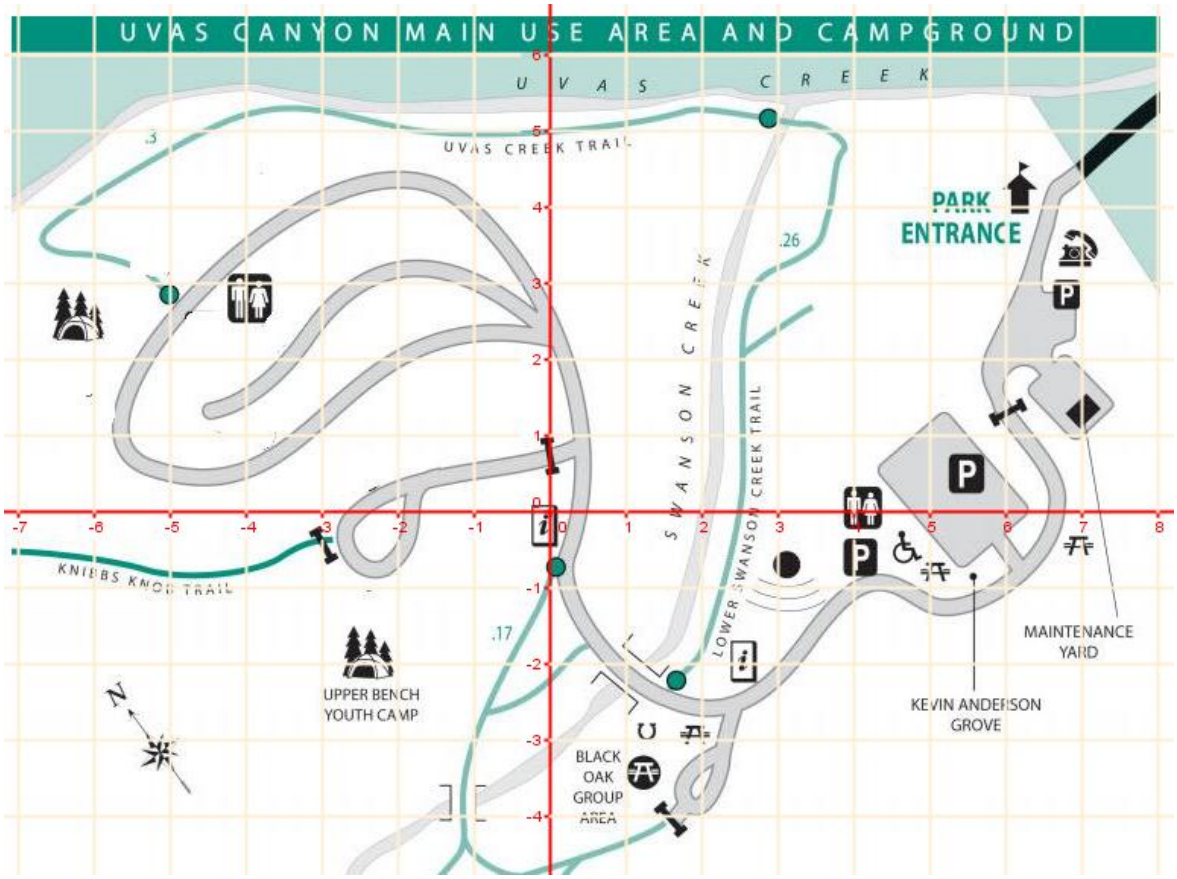
1.3. How many Standard and Igloo tents Johnny needs to reserve ahead of the time?

1.4 What is the cost of the tent renting, based on the result from question 1.3?

1.5 According to the park rules, there cannot be more than 3 tents per site. What may be the total campground use fee for the family over the entire reunion? (Assume that they will pack as many tents as a site may hold)

Task 2: Finding the Ideal Camping Sites

A map was given to Johnny as he plans to reserve the camp sites. The guidelines given by the reunion committee is: the site need to be equidistant to all restrooms and the "upper bench youth camp center"



2.1 Find the coordinates of the restrooms?

2.2 If each coordinate unit is 100 feet, what is the distance between two restrooms?

2.3 Let two restrooms on the map to be point A and point B. The upper bench youth camp to be point C(-2, -2). Find the equations that represent $\overline{AC}$ and $\overline{BC}$?

2.4 Find the equations of the perpendicular bisectors of $\overline{AC}$ and of $\overline{BC}$?

2.5 Find the intersection (E) point of the equations in question 2.4.

2.6 Find the distance of $\overline{EA}$, $\overline{EB}$ and $\overline{EC}$.

2.7 Write a system of inequality such that the solution of the system to represent ΔABC and its interior.