



Solves a situational problem

Name : _____

Date : _____

secondary 3

Loft Story

A popular reality show on French TV is *Loft Story*. In this show, a group of young people share a loft in a high-rise building, and are being videotaped constantly. They have to compete in different challenges during their stay. Viewers of the show vote them out of the loft, one at a time. The last person wins a car and \$50 000.

Catherine has been named producer of the coming season of *Loft Story*. She has asked for an expense budget of \$97 000. This amount includes 10% for unexpected expenses. This show requires a lot of material as well as production and animation teams of considerable size. Since it's the first large project that Catherine has been put in charge of, the manager of the television station has asked to have her budget figure approved by the finance department before she begins producing the show.

As part of the finance department staff, it's your job to review the production constraints for the show, to confirm that the budget requested by Catherine is realistic, and to make recommendations if necessary.



Student Booklet

Production Constraints

1) The Rooms :

The rooms for the girls and boys are both rectangular, and must have equal areas. Also, based on the results of a survey of previous tenants in *Loft Story*, we know that the length of the girls' room must be 8 metres more than twice its width. As for the boys' room, the width must be 3 metres more than the width of the girls' room, and its length must be 7 metres less than that of the girls' room.

The floors will be covered with bamboo flooring, which costs \$12 per m².

To furnish the two rooms, estimate spending a total of \$4 000.

2) The court :

We know that if 700 m² is added to the area of the square court, the area would be 1 100 m².

The court will be divided into 4 identical square parts, such that :

- $\frac{3}{4}$ of the court will be lawn. Sod can be purchased in rectangular sections of 70 dm² which cost \$10 each.
- The other part of the court must be fenced in, as a pool will be added later. Fencing costs \$30 a metre.

3) Salaries :

- The weekly salary of each camera operator is twice that of the hair stylist. There are 7 camera operators for the show. The hair stylist, according to him, makes 100 dollars more each week than the makeup artist does. You know that the total combined salaries of all these employees is \$1100 more than 13 times the hair stylist's salary.
- The salary of the director is calculated per show. If \$300 is deducted from 3 times her salary, the resulting amount is less than or equal to twice her salary.
- The show will be broadcast 5 evenings a week, for 10 weeks.

4) Food :

- On average, each week the boys eat 4 kilograms more than three times what the girls eat. If you find the product of the amount of food eaten by the girls and the amount eaten by the boys each week, the result is 100 times what the girls eat per week.
- The food cost is estimated to be \$6 a kilogram.

Name : _____

Show the main stages of your work

Rooms :

Court :

Name : _____

Salaries :

Food :



Name : _____

Budget Review :

Item	Cost	Comment
Rooms		
Court		
Salaries		
Food		
Total Cost		

Recommendation :