



A Garden for Grandma

General Instructions:

This task has 4 parts. Use the information given to answer each question.

Your mother has decided to clear out a section of the back yard to create a vegetable garden for your grandmother who has come to live with you.

She wants to include a special section for grandma's herbs. Mother has asked you to help her to make some decisions before she begins clearing the area. You will have to help her to:

- design the layout for the garden
- select the area for the herbs
- choose a farm store from which to buy the vegetable and herb seeds and other materials.





Part 1:

Designing the Vegetable Garden

Mother has identified a section of the back yard for Grandma's vegetable garden. It has an area of 180 m^2 . She wants the patch for grandma's herbs to have a rectangular shape. The table below shows the space required for the herb plot.

Herb Patch	Space Required (m^2)
	60

Use the grid provided to draw the outline of

- A. Grandma's Vegetable Garden and
- B. the Herb Patch.

Be sure to label the sections for the Vegetable garden and the herb patch. Be sure to include their measurements.

Each square on the grid represents 1 m^2 .

[illegible]



Part 2:

Getting the Herb Patch Ready

Mother wants to make sure that grandma has the best soil for her herbs. She did some research and found out the following:

- The soil in the patch must be mixed with a special herb tonic(fertilizer) and should be administered in fourths with a minimum of 12hours between each application.
- For best results, it is advised that application be done in the cool of afternoon.
- That one bag of this tonic contains $5\frac{1}{2}$ grams which will only cover a portion of the herb patch.

A. How long will it take you to completely cover the Herb Patch with this special herb tonic, if your first application is at 4:30 p.m.?



- B. Mother need it to be ready before Sunday, which is when grandma returns from her visit with your aunt Clara. If she wanted it to be ready at least a day before, when will your first application be?

- C. If it takes $2\frac{1}{2}$ bags of herb tonic to cover one-quarter of the herb patch. How many bags of herb tonic will you need to cover the entire herb patch?



Part 3:

Fencing the Grandma's vegetable garden

Mother is also thinking of fencing grandma's garden to keep the animals out. If one roll of wire is 30 metres long and for every 20 metres you will need a 5 metre iron post to strengthen the fence. Using the information in **part 1** to help you answer the following questions.

- A. How many rolls of wire will be needed to fence the garden? Show all your work.

- B. How many of the iron post will you need for the garden? Show all your work.



Part 4:

Buying materials for Grandma's garden

There is one question in this part: Read each carefully then answer the question.

4. There are two hardware stores that sell the materials you will need. Mother needs to decide which store to buy the materials from. The price and delivery costs are given in the table below.

Item	Shawna's Hardware & Farm Supplies	Cheoma One-Stop Farm & Hardware Store
Herb Tonic	\$450 per bag	\$500 per bag if less than 10 bags are purchased \$400 per bag if 10 or more bags are purchased
Wire	\$8,500 per roll	\$9000 per roll if less than 5 rolls are purchased \$8,500 per roll if 5 or more rolls are purchased
Iron Post	\$3000	\$3500 per post if less than 15 posts are purchased \$2800 per bag if 15 or more posts are purchased
Delivery Cost	\$9000	\$7000

Which hardware should mother buy the materials from? Give reasons for your answer.



PEP Practice Test:

Mathematics - Performance Task