AS91574 Linear Programming Practice Test

***Eric’s Electronics***

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An online store called *Eric’s Electronics* is considering selling *zPhones* and *zPods* from their website.

Constraints

They have obtained the following information from the wholesale suppliers:

* + The storage space required for each *zPhone* or *zPod* is the same, and currently the store only has space to store a maximum of 1,000 units.

This can be written as *x* + *y* ≤ 1,000 where *x* represents the number of *zPhones* ordered and *y* represents the number of *zPods* the store orders.

* + The wholesale price for each *zPhone* is $600 and the wholesale price for each *zPod* is $200.

The shop has a budget of $320,000 to spend on their order.

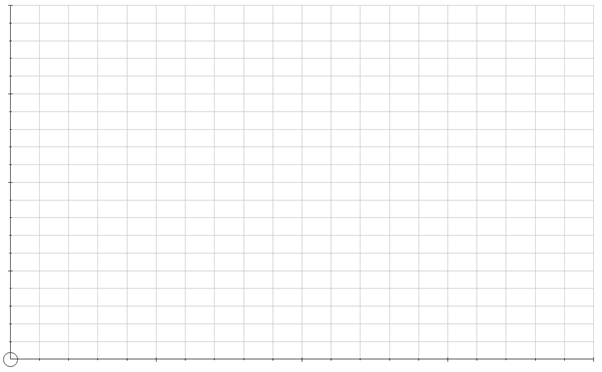
* + The minimum number of *zPhones* they can order is 200
  + The mimimum number of *zPods* they can order is 400

Income

The store originally decided to sell the *zPhones* and *zPods* for the recommended selling price of $1000 for each zPhones and $400 for each zPod.

The income *I* ($) can be expressed as *I* = 1,000*x* + 400*y*

Calculate how many *zPhones* and *zPods* the store should order to maximise their income.



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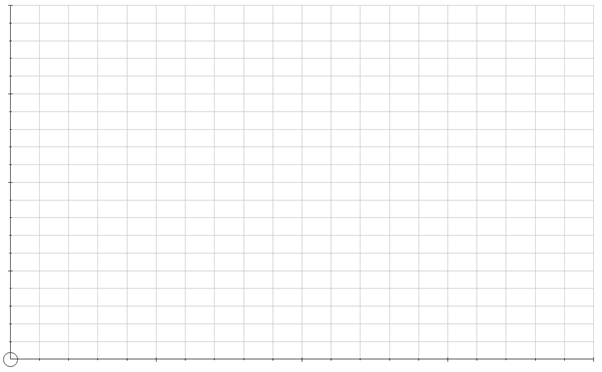
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Future Income

Eric does not know what the exact selling price will be for *zphones* and *zpods* in the future but it is predicted that the selling prices of *zphones* and *zpods* will be in the ratio of 3:1.

Recommend to Eric how many *zphones* and how many *zpods* he should order to maximise his profit.

You must clearly justify your answer.



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