The one where money need to be transported

Due 30 Sep by 23:59 **Points** 3 **Submitting** an external tool
Available until 30 Sep at 23:59

Successfully solving this problem will award the student **3 point** towards Examination 1

Requirements

- The script must pass all the automatic tests
- The script must pass a manual inspection
- **The student must write the script on his or her own**, any suspicion about cheating, cooperation, and/or plagiarism will be reported to the Discipline Board (see the **Study Guide** (https://hkr.instructure.com/courses/5190/files/1027789/download?download_frd=1) for more information). The students script will be checked both manually and using anti-plagiarism software

Instructions

1. Analyse the problem below using **Polya's Problem solving Technique (https://math.berkeley.edu/~gmelvin/polya.pdf)**
2. Create a script named **Lab1_3.py** that solves the problem according to the given instructions
3. Pay special attention when formatting the output as it must match the specified format **exactly** (character by character) to pass the tests
4. Upload the script using the link below

Task description

A local bank office often transports bags of money to and from their main office. They have asked you to develop a script that can help them know beforehand how many bags will fit in the truck transporting the money, and what the value of all the bags combined is.

The truck transporting the money bags can vary in size from transport to transport so the size must be read from the user each time running the script. If the user enters a volume less than 100L they shall be asked again until they give a volume larger than, or equal to, 100L.

After having read the size of the truck, the script shall calculate how many money bags of each size fits in the specified truck and display it on **exactly** the following format:

```
2 big bags
1 medium bags
0 small bags
```

The banks internal policy documents dictate that they must only use bags in three sizes (20L, 50L, and 80L) and that they must always use as many of the bigger bags as possible. Here is an example to illustrate this:

```
Truck size = 220L

1. How many big bags (80L) can we fit in 220L? Answer is 2.
   We now have 60L left in truck.

2. How many medium bags (50L) can we fit in the remaining 60L? Answer is 1.
   There is still 10L left in the truck.

3. How many small bags (20L) can we fit in the remaining 10L? Answer is 0.
   There is 10L left in the truck that we can not fit any bag into.
```

Having decided how many bags can be transported it is time to calculate how much the shipment is worth and display this information to the user. A small bag is worth 10000kr, a medium bag 30000kr, and a big bag is worth 60000kr. The following format must be used when printing the total value:

```
Total value: 150000kr
```

Comments and additional resources

- Students are highly recommended to first solve all the tasks from the corresponding lectures and exercises before attempting to solve this problem. Having a solid plan before starting to code will also help
- The student can upload as many times as he or she likes to before the deadline
- When it comes to calculating how many bags of each size one will end up with the student has different options, either to use loops or to use math. If the student opts for using loops it might help to imagine adding one bag at the time to the truck, first as many big bags as

possible, then as many medium bags as possible, and finally as many small bags as possible

- This **video (https://youtu.be/oYj7VM4PEQA)** recorded while running the finished script showcases how the script shall look and work when finished

This tool needs to be loaded in a new browser window

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