Due Date: 21 March 2020 until midnight

On the planet Zephod, which orbits the star Betelgeuse,
- The sharks increase at a rate of 5% of the guppy population per day, provided there are 50 or more guppies per shark. Otherwise, the sharks die off at a rate of 50% per day.
- The guppies increase at a rate of 80% per day, provided the shark population is less than 20 % of the guppy population. Otherwise there is no increase in the guppy population.
- Each shark eats 5 guppies a day.

Write a C program that allows user to input the initial shark population, the initial guppy population, and the number of days of observation. It will simulate shark and guppy population change in each day as given in the sample run.

For this purpose, use function **take_initialvalues()** that inputs initial shark population, the initial guppy population, and the number of days of observation from user and returns them to the calling function.

Use **update()** function that takes the current shark's and guppie's population and updates the shark's and guppie's populations and returns them to the calling function.

Your main program simulates populations of sharks and guppies each day until one of them dies off or till the end of the observation period is reached.

All reproductions and deaths occur overnight. Any fractional fishes are discarded. (These sharks only feed during the day.)

Sample Run:

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Please enter number of sharks: 54
Please enter number of guppies: 1000
Number of days to observe: 15

Start of day 0:   Sharks = 54      Guppies = 1000
End of day   0:   Sharks = 54      Guppies = 730


Start of day 1:   Sharks = 27      Guppies = 1314
End of day   1:   Sharks = 27      Guppies = 1179



Start of day 2:   Sharks = 13      Guppies = 2122
End of day   2:   Sharks = 13      Guppies = 2057


Start of day 3:   Sharks = 115     Guppies = 3702
End of day   3:   Sharks = 115     Guppies = 3127
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Start of day 4:   Sharks = 57     Guppies = 5628
End of day   4:   Sharks = 57     Guppies = 5343

Start of day 5:   Sharks = 324    Guppies = 9617
End of day   5:   Sharks = 324    Guppies = 7997

Start of day 6:   Sharks = 162    Guppies = 14394
End of day   6:   Sharks = 162    Guppies = 13584

Start of day 7:   Sharks = 841    Guppies = 24451
End of day   7:   Sharks = 841    Guppies = 20246

Start of day 8:   Sharks = 420    Guppies = 36442
End of day   8:   Sharks = 420    Guppies = 34342

Start of day 9:   Sharks = 2137    Guppies = 61815
End of day   9:   Sharks = 2137    Guppies = 51130

Start of day 10:   Sharks = 1068    Guppies = 92034
End of day   10:   Sharks = 1068    Guppies = 86694

Start of day 11:   Sharks = 5402    Guppies = 156049
End of day   11:   Sharks = 5402    Guppies = 129039

Start of day 12:   Sharks = 2701    Guppies = 232270
End of day   12:   Sharks = 2701    Guppies = 218765

Start of day 13:   Sharks = 13639    Guppies = 393777
End of day   13:   Sharks = 13639    Guppies = 325582

Start of day 14:   Sharks = 6819    Guppies = 586047
End of day   14:   Sharks = 6819    Guppies = 551952

Start of day 15:   Sharks = 34416    Guppies = 993513
End of day   15:   Sharks = 34416    Guppies = 821433

DONE!
```