Test out:

Option 1. Write a program that sums up all the multiples of 3 or 5 (i.e. 3, 5, 6, 9, 10, etc.) under 100.

Option 2. Write a program that tells whether an integer is a prime number. Print 'yes, x is a prime number' if it is a prime number; otherwise, print 'no, x is not a prime number'. Here, x is what the user has input.

Advance tasks:

1) Battleship
Guidelines:
1. Print a 5x5 board, with each spot represented by '-'
2. Define a position for a 1x1 battleship. Prompt for an input of position, and print 'X' if the player hits the ship and 'O' otherwise
3. Declare a boolean to indicate whether the player hit it or not. Make a for loop to give the player 10 chances to guess. If the player has found the battleship, then escape from the for loop.
4. Print 'you win' if the player finds the battleship within the given chances. Otherwise, print 'gameover…'
5. Modify your code, so now the size of your battleship is 1x3
6. Advanced: modify your code to place the battleship randomly

2) Hangman
Guidelines:
1. Create a string that contains the word, and another string, called printword, with the same number of '_' as the number of letters in the word.
2. Prompt for a letter, and print the letter that the player entered
3. Make a for loop to go through each letter of the word, and replace the corresponding spot of printword if the guess matches the letter. Then print the print word
4. Make a while loop to keep prompting for new guess
5. Add a for loop inside the while loop to check whether the player has got all the letters. If the player has got the word, then print 'you win' and exit the while loop.
6. Modify the while loop so that the player only has 5 chances not to hit any letter of the word.
7. Advanced: Add an array of words, and pick a word from the list randomly for the player to guess

3) Flying pig
Guidelines:
1. Write down the formula that governs projectile motion, and interpret the velocity and displacement after a small time step in terms of those before the time change.
2. make arrays for recording the position and velocity at discrete time t.

3. define your setting: values of gravity, shooting angle, shooting speed, total duration of flight
4. create a for loop to compute the next velocity and position values after a small time step
5. plot your position arrays