1. **Write a function to check whether a number falls in a given range**

```
        def test_range_check(n):
    if n in range(1,101):
        print(" %s is in the range"%str(n))
    else :
        print(" %s is in outside the given range"%str(n))
```

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2. Some board games require you to reduce the number of cards you are holding by half, rounded down.

```
        num_cards = eval(input('How many cards do you have? '))
print('After reducing, you now have:', num_cards // 2)
```

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3. Write a program that asks the user to enter a positive integer.

```
        from random import randint

        num = eval(input('Enter a positive integer: '))

        num_times = randint(num, num+10)

        for i in range(num_times):
                print('A', end='')
        print()
```

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4. This is a very simple billing program.

```
        start = eval(input('Enter starting hour (0-23): '))
end = eval(input('Enter ending hour (0-23): '))
if end >= start:
    print('Total: ', (end-start)*5.50)
else:
    print('Total: ', (24-start + end)*5.50)
```

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5. One way to estimate probabilities is to run what is called a computer simulation.

```
        from random import randint

count = 0
for i in range(10000):
    r1 = randint(1, 6)
    r2 = randint(1, 6)
    if r1 == r2:
        count += 1
print('Percentage of doubles:', 100*count/10000)
```