prime number

Wiki Definition: a natural number greater than 1 that cannot be formed by multiplying two smaller natural numbers

built-in function

Notice: always check is there any built-in function first

```matlab
% doc('prime')
% doc('isprime')
for x = 2:50
    if isprime(x)
        disp(x)
    end
end
```

```
 2
 3
 5
 7
11
13
17
19
23
29
31
37
41
43
47
```

implement isprime yourself

```matlab
for x = 2:50
    if my_isprime(x)
        disp(x)
    end
end
```

```
 2
 3
 5
 7
11
13
17
19
23
29
31
37
```

```
        41
        43
        47
```

function definition

```matlab
function ret = my_isprime(num1)
% improve with known_prime, see generate_first_K_prime_number.mlx
% return true if num1 is prime number otherwise false
% num1(int)
% (ret)(bool)
for x = 2:(num1-1)
    if is_divisible(num1, x)
        ret = false;
        return
    end
end
ret = true;
end

function ret = is_divisible(a, b)
% return true if a is divisible by b otherwise false
% doc('mod')
ret = mod(a,b)==0;
end
```