

PRIMES + SCRATCH: TEAM TASK

The Scratch code shown below finds the first 10 prime numbers and lists them, as shown on the right. The code is available at: <https://scratch.mit.edu/projects/510950947/editor>

1. Execute, edit and re-execute, and study the code and its output to understand how it works.
2. Design, code and test a way of making this code more efficient
3. Design, code and test a way of finding the first 10 twin primes
4. Design, code and test a pattern that may always give you a prime number (for example, are all numbers like 11, 111, 1111, 11111 always prime?)
5. Create a poster presentation of what you did, what you learned, and what else you'd like to know.

list of primes	
1	2
2	3
3	5
4	7
5	11
6	13
7	17
8	19
9	23
10	29
+ length 10 =	

```
when green flag clicked
  delete all of list of primes
  set number to test to 2
  repeat until length of list of primes = 10
    prime test
    change number to test by 1

define prime test
  set divisor to 2
  set failed prime test? to no
  repeat until divisor = number to test or failed prime test? = yes
    if number to test mod divisor = 0 then
      set failed prime test? to yes
    change divisor by 1
  if failed prime test? = no then
    add number to test to list of primes
```

HOW TO WORK AS A TEAM

1. A **non-competitive** atmosphere among team members and among teams
2. A **common purpose** within and across teams
3. **Collaborative** problem-solving, where everyone contributes
4. **Scaffolding** by the teacher as needed
5. **Everyone develops understanding**, with no team members left behind
6. **Exchange of ideas among teams**, with opportunities for cross-team visits
7. **Multiple solution methods**, modelling/solving problems in more than one way
8. **A culminating sharing** of what teams did, learned, and wonder about