

## Scaffolding for Lesson 1.1, Questions 7, 11 & 14

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7. Show that there are no prime numbers from 200 to 210.

200 201 202 203 204 205 206 207 208 209 210

Numbers greater than 10 that end in 0, 2, 4, 5, 6, or 8 cannot be prime. Why not?

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The numbers from 200 to 210 that do not end in 0, 2, 4, 5, 6, or 8 are 201, 203, 207, and 209. Show why each is not prime. The first one is done for you. Hint: Try dividing by 3, 7, or 11.

201:  $3 \times 67 = 201$

203: \_\_\_\_\_

207: \_\_\_\_\_

209: \_\_\_\_\_

11. The consecutive numbers 2 and 3 are both prime.

In consecutive numbers, if the first number is odd, the next number is \_\_\_\_\_.

If the first number is even, the next number is \_\_\_\_\_.

Other than 2, can an even number ever be prime? Why or why not?

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Explain how you know there can't be any other consecutive prime numbers other than 2 and 3.

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14. A classroom of students can be formed into 2, 3, and 5 groups with 0 students left over.

How many students are likely in the class?

Hint: There are probably more than 20 students in a class.

What number greater than 20 has the factors 2, 3, and 5?

Show your work.