

Objective: Investigating number patterns and sums

Time: 15 minutes

This activity explores prime numbers by investigating “vertical primes”. Vertical primes are defined as prime numbers that are vertically adjacent on the 100 board such as 31 and 41.



For this activity you will need a Hundreds Board and one Tile E.

Begin by observing that A+ Tile E can be placed on the board in a variety of ways. The first four are represented below and there is one other orientation that will be needed to answer part of the challenge question.



Orientation 1



Orientation 2



Orientation 3



Orientation 4

Place Tile E on the board so that it covers the numbers 31, 41, 42, and 43. Observe that the numbers 31, 41 and 43 are prime. Using Tile E in any of the four orientations shown above, find as many places on the board as possible where Tile E covers exactly three prime numbers. Record your answers showing all four numbers that were covered with Tile E.

(separate your answers with parentheses)

Challenge Problem - There are three places on the board where Tile E will cover *four* numbers that meet one of the following conditions:

1. There is one position that will cover *four numbers that are all prime*.
2. There are two additional positions that will cover *four numbers none of which are composite numbers*.

For this challenge you may place the A+ Tile E on the board in ANY orientation.

List your answers in the same manner as you did in the first part of this activity.
