# Title

Exploring integer division

# Problem Description

In this problem we will be exploring integer division and the creation of good test cases.  Create two variables of type int with names x and y.  Have the user enter values to store in x and y.  Output the result of the following equation:

$$z = \frac{x + 2y}{2x + y}$$

Your task is to come up with pairs of numbers that will satisfy the following:

1) z is exactly correct (that is, integer division does not cause a loss of information)
2) z is zero even though x and y are both nonzero
3) What happens if 2x = -y?
4) z is not zero, but the result is not correct since integer division has caused a loss of information

# Testing

Since your goal is to come up with your own test cases, we will not provide you with any here.

# Time Target

***      Less than 10 minutes

**      10-15 minutes

*      greater than 15 minutes

# Section

Variables and Fundamentals