



# Positive Mixed Number $\longleftrightarrow$ Improper Fraction

## Project Goal:

Students will create a program where the user can either type in a mixed number and the program will transfer it to a non-reduced improper fraction, or the user can type in an improper fraction and the program will transfer it to a mixed number.

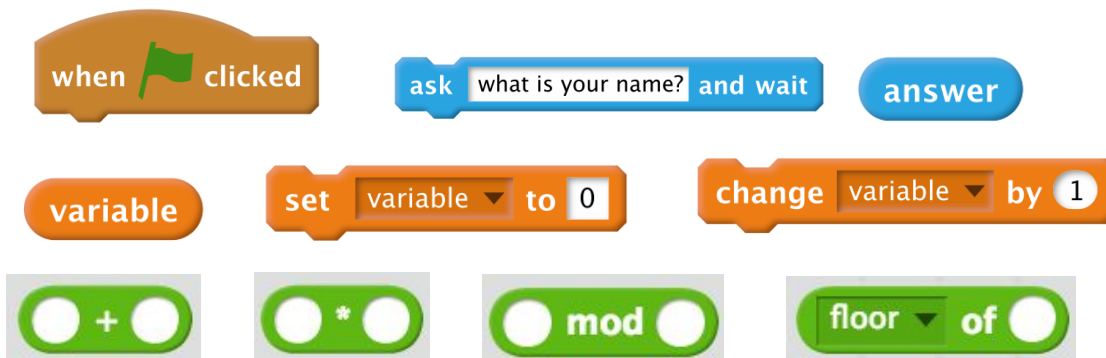
## Standard:

[CCSS.MATH.CONTENT.4.NF.A.1](#) and [CCSS.MATH.CONTENT.4.NF.A.2](#)

Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

## Blocks:



# #CSandMath





**Student Handout:**

[Positive Mixed Number ↔ Improper Fraction Student Guide](#)

**Teacher Guide:**

[Positive Mixed Number ↔ Improper Fraction Teacher Guide](#)

**Solution:**

Under the Improper Fraction Sprite:

```

when this sprite clicked
ask What is the numerator to your fraction? and wait
set Improper: Numerator to answer
ask What is the denominator to your fraction? and wait
set Improper: Denominator to answer
set Mixed Number: Whole to floor of Improper: Numerator / Improper: Denominator
set Mixed Number: Numerator to Improper: Numerator mod Improper: Denominator
set Mixed Number: Denominator to Improper: Denominator

```

Under the Mixed Number Sprite:

```

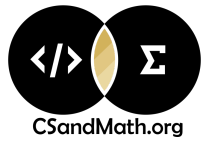
when this sprite clicked
ask What is the whole number? and wait
set Mixed Number: Whole to answer
ask What is the numerator to the fraction? and wait
set Mixed Number: Numerator to answer
ask What is the denominator to the fraction? and wait
set Mixed Number: Denominator to answer
set Improper: Numerator to Mixed Number: Denominator * Mixed Number: Whole + Mixed Number: Numerator
set Improper: Denominator to Mixed Number: Denominator

```

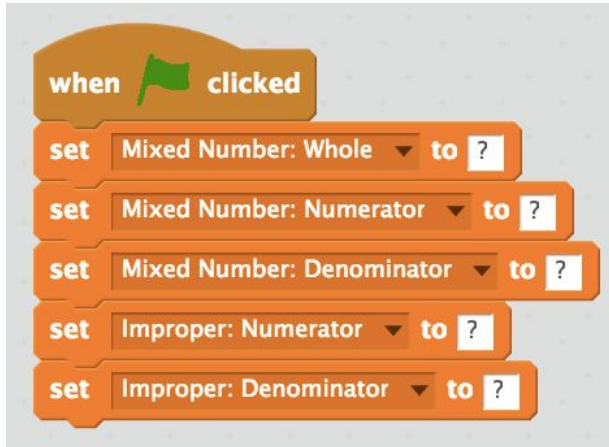




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Under Any Sprite:



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