



PROFESSOR PETE'S  
**GADGETS**

**WORKSHEETS**

**PROFESSOR PETE'S CLASSROOM** FRACTION ADDITION & SUBTRACTION

PICTURE

$3 \frac{1}{2} + 2 \frac{3}{5} =$

Choose new denominator/s

NUMERATOR: 1 2 3 4 5 6 7 8 9 10 11  
1 1 1 1 1 1 1 1 1 1 1  
2 3 4 5 6 8 9 10 12 15 20  
DENOMINATOR

NUMERATOR: 1 2 3 4 5 6 7 8 9 10 11  
1 1 1 1 1 1 1 1 1 1 1  
2 3 4 5 6 8 9 10 12 15 20  
DENOMINATOR

# FRACTION ADDITION & SUBTRACTION

## Classroom Professor Gadgets: Fraction Addition and Subtraction

This program is designed to help students to understand the process of adding and subtracting fractions. Each a progress arrow allows for teacher direction at each step of the process. Shapes will animate as each step is made.

**Tool Panel:** multiple tools allow for manipulation on screen

**Shapes:** pictorial representation of the fractions

**Vertical Addition:** algorithm

**Horizontal Addition:** algorithm

**Choose Vertical or Horizontal Algorithm:** show one or the other or both together

**Whole numbers:** enter whole numbers

**Denominator:** enter first  
**Numerator:** enter second

**Second Fraction:** enter second fraction the same way

**Progression:** moves forward or back through steps in algorithm

**Choose new denominator/s**

The screenshot shows the software interface with the title "CLASSROOM PROFESSOR FRACTION ADDITION & SUBTRACTION". It features a central workspace with a blue background and a tropical scene at the bottom. On the left is a vertical "TOOL PANEL" with icons for "PICTURE", a plus sign, a minus sign, a fraction bar, and a refresh button. The main workspace displays a horizontal addition problem:  $3\frac{1}{2} + 2\frac{3}{5} =$  followed by a blank box. Above this, there are two sets of yellow circles representing the fractions. To the right, a vertical addition algorithm is shown:  $3\frac{1}{2} + 2\frac{3}{5}$  with a horizontal line under the second fraction. Below the main workspace are two input panels for "NUMERATOR" and "DENOMINATOR" with sliders and buttons. A "Choose new denominator/s" button is also present. A "Progression" arrow is located at the bottom right.

**Tool Panel:** multiple tools allow for onscreen manipulation



**Pointer:** resets cursor to a pointer

**Pen:** choose from 9 shades in the pop out panel

**Eraser:** removes all pen marks

**Reset:** resets all settings back to a default fraction

**Shape:** Toggles between a circle and a square

**Operation:** choose addition or subtraction

**Horizontal:** algorithm layout

**Vertical:** algorithm layout

**Options Pop Up:**

**Decimal separator:** choose “.” or “,”

**Decimal places:** choose from 1 to 6

**Use “and” in text display:** to show or omit “one hundred **and** fifty-six”

**Text display choice:** to show “**quarter**” or “**fourth**”

**Save the last fraction:** the last fraction is saved or reverts to preset.

## Entering Fractions:

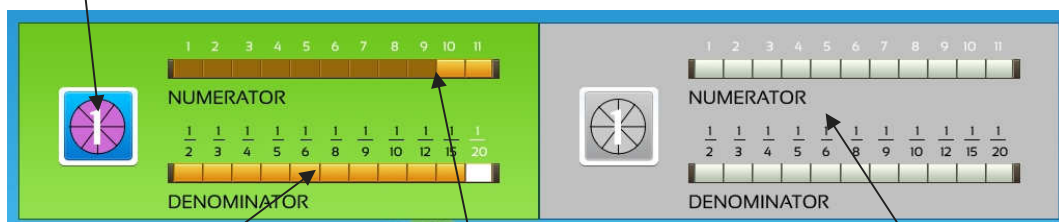
### 1. Choose operation



Toggle between addition and subtraction

### 2. Enter first fraction - note always choose the denominator before the numerator

Enter whole number



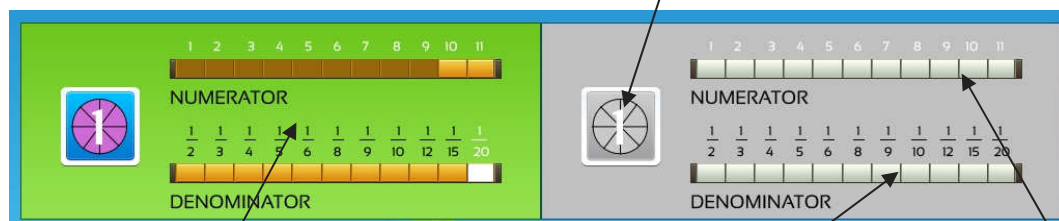
Choose denominator before the numerator

From selected numbers choose the numerator

Second fraction is greyed out until first fraction is entered

### 3. Enter second fraction

Enter whole number



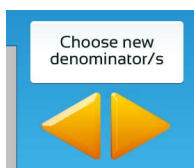
First fraction is greyed out once entered

Choose denominator before the numerator

From selected numbers choose the numerator

## Completing the operation:

### 4. Progress through the algorithm steps



Choose new denominator/s

Click arrows to progress through steps or revise previous steps. Shapes will animate with each step.