Algorithm

Step 1: Start

Step 2: Read value for x_1, y_1, x_2, y_2

Step 3: $x_3 = (x_1 * x_2) + (x_2 * y_1)$

Step 4: $y_3 = (y_1 * y_2)$

Step 5: if $(x_3 > y_3)$ // If $(x_3 > y_3)$ becomes false goto step 5.1

         $div = y_3$

Step 5.1: else

         $div = y_3$

Step 6: for $(i = div, i > 0; i--)$ // If this condition becomes false goto step 7.

         {

Step 6.1: if $(x_3 \% i == 0 \ \&\& \ y_3 \% i == 0)$

         {

            $x_3 = x_3 / i;$

            $y_3 = y_3 / i;$

            }

         }

Step 7: Print "Sum of given 2 fractions is "

Step 8: Stop.

Flowchart:

```
                    ( Start )
                        |
                        v
          / Read the value: /
         /  x1, y1, x2, y2  /
                        |
                        v
        | x3 = (x1*y2)+(x2*y1) |
        | y3 = (y1 * y2)       |
                        |
                        v
                  /  if  \          false
                 <  x3>y3  >----------------->  | div=x3 |
                  \      /                            |
                     | True                           |
                     v                                |
                | div=y3 |                            |
                     |<------------------------------
                     v
   false     /   for       \
   <--------<   (i=div; i>0;  >
   |         \    i--)       /
   |              | True
   |              v
   |          /    if      \        False
   |         < (x3%i ==0 &&  >----------->
   |          \  y3%i ==0 ) /          |
   |              | True                |
   |              v                     |
   |        | x3 = x3/i. |              |
   |        | y3 = y3/i  |              |
   |              |_____|
   |_____ |
                  v
         / Print sum of given 2 /
        /  fraction is         /
                  |
                  v
              ( Stop )
```