

Name: ..... Class: .....

## Estimate sums and differences of fractions using benchmarks

 Estimate the sums and differences of the following fractions using the benchmarks 0,  $\frac{1}{2}$ , or 1.

a.  $\frac{6}{8} + \frac{1}{4}$  is about \_\_\_\_\_

i.  $\frac{3}{5} + \frac{6}{7}$  is about \_\_\_\_\_

b.  $\frac{13}{15} + \frac{7}{8}$  is about \_\_\_\_\_

j.  $\frac{17}{19} + \frac{5}{7}$  is about \_\_\_\_\_

c.  $\frac{43}{45} - \frac{8}{15}$  is about \_\_\_\_\_

k.  $\frac{40}{42} - \frac{6}{13}$  is about \_\_\_\_\_

d.  $\frac{3}{5} + \frac{2}{6}$  is about \_\_\_\_\_

l.  $\frac{1}{3} + \frac{1}{4}$  is about \_\_\_\_\_

e.  $\frac{10}{12} + \frac{5}{7}$  is about \_\_\_\_\_

m.  $\frac{17}{18} + \frac{4}{6}$  is about \_\_\_\_\_

f.  $\frac{33}{35} - \frac{5}{12}$  is about \_\_\_\_\_

n.  $\frac{30}{37} - \frac{2}{14}$  is about \_\_\_\_\_

g.  $\frac{15}{17} + \frac{9}{12}$  is about \_\_\_\_\_

o.  $\frac{11}{13} + \frac{2}{17}$  is about \_\_\_\_\_

h.  $\frac{13}{15} - \frac{3}{10}$  is about \_\_\_\_\_

p.  $\frac{10}{11} - \frac{9}{18}$  is about \_\_\_\_\_

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Estimate the sums and differences of the following fractions using the benchmarks 0,  $\frac{1}{2}$ , or 1.

a.  $\frac{6}{8} + \frac{1}{4}$  is about \_\_\_\_\_

Since  $\frac{1}{4}$  is  $\leq \frac{1}{4}$ , let's round it to 0.

Let's first of all estimate  $\frac{6}{8}$ .

Finally, let's add using the benchmarks.

$$1 + 0 = 1$$

Since  $\frac{6}{8}$  is  $\geq \frac{3}{4}$ , let's round it to 1.

So,  $\frac{6}{8} + \frac{1}{4}$  is about 1.

Secondly, let's estimate  $\frac{1}{4}$ .

b.  $\frac{13}{15} + \frac{7}{8}$  is about \_\_\_\_\_

Since  $\frac{7}{8}$  is  $> \frac{3}{4}$ , let's round it to 1.

Let's first of all estimate  $\frac{13}{15}$ .

Finally, let's add using the benchmarks.

$$1 + 1 = 2$$

Since  $\frac{13}{15}$  is  $> \frac{3}{4}$ , let's round it to 1.

So,  $\frac{13}{15} + \frac{7}{8}$  is about 2.

Secondly, let's estimate  $\frac{7}{8}$ .

c.  $\frac{43}{45} - \frac{8}{15}$  is about \_\_\_\_\_

Since  $\frac{8}{15}$  is  $> \frac{1}{4}$  and  $< \frac{3}{4}$ , we round it to a  $\frac{1}{2}$ .

Let's first of all estimate  $\frac{43}{45}$ .

Finally let's subtract the benchmarks.

Since  $\frac{43}{45}$  is  $> \frac{3}{4}$ , let's round it to 1.

$$1 - \frac{1}{2} = \frac{1}{2}$$

Secondly, let's estimate  $\frac{8}{15}$ .

So,  $\frac{43}{45} - \frac{8}{15}$  is about  $\frac{1}{2}$ .