

Name:

Class/Set:

Algebraic Fractions - Add/Subtract 1

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1: Simplify the following as far as possible:

a) $\frac{v}{16} + \frac{7v}{8}$

b) $\frac{8u}{27} + \frac{2u}{9}$

c) $\frac{4h}{7} - \frac{6h}{35}$

d) $\frac{13n}{20} - \frac{2n}{5}$

e) $\frac{23x}{30} + \frac{x}{10}$

f) $\frac{r}{6} + \frac{11r}{30}$

2: Simplify the following as far as possible:

a) $\frac{f}{3} - \frac{f}{4}$

b) $\frac{4t}{5} - \frac{t}{3}$

c) $\frac{q}{2} + \frac{4q}{9}$

d) $\frac{e}{9} + \frac{3e}{4}$

e) $\frac{9y}{10} - \frac{2y}{3}$

f) $\frac{7a}{10} - \frac{a}{7}$

3: Simplify the following as far as possible:

$$\text{a) } \frac{k}{4} + \frac{2(3k-1)}{3}$$

$$\text{b) } \frac{3(2b+3)}{4} + \frac{b}{10}$$

$$\text{c) } \frac{5w}{9} - \frac{w-1}{3}$$

$$\text{d) } \frac{5z}{6} - \frac{2(z+4)}{3}$$

$$\text{e) } \frac{3j-2}{2} + \frac{3j}{10}$$

$$\text{f) } \frac{3p}{8} - \frac{2p-1}{2}$$

4: Simplify the following as far as possible:

$$\text{a) } \frac{2s+1}{6} + \frac{3(s+2)}{4}$$

$$\text{b) } \frac{2(m+3)}{3} - \frac{2(3m+2)}{5}$$

$$\text{c) } \frac{3(c-3)}{8} + \frac{2c-3}{4}$$

$$\text{d) } \frac{g-2}{2} - \frac{2(g+1)}{5}$$

$$\text{e) } \frac{f-4}{6} + \frac{3f+1}{2}$$

$$\text{f) } \frac{3(x-1)}{5} - \frac{2x-1}{10}$$

Answers: Algebraic Fractions - Add/Subtract 1

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1: a) $\frac{v}{16} + \frac{14v}{16} = \frac{15v}{16}$ b) $\frac{8u}{27} + \frac{6u}{27} = \frac{14u}{27}$ c) $\frac{20h}{35} - \frac{6h}{35} = \frac{14h}{35} = \frac{2h}{5}$
d) $\frac{13n}{20} - \frac{8n}{20} = \frac{5n}{20} = \frac{n}{4}$ e) $\frac{23x}{30} + \frac{3x}{30} = \frac{26x}{30} = \frac{13x}{15}$ f) $\frac{5r}{30} + \frac{11r}{30} = \frac{16r}{30} = \frac{8r}{15}$

2: a) $\frac{4f}{12} - \frac{3f}{12} = \frac{f}{12}$ b) $\frac{12t}{15} - \frac{5t}{15} = \frac{7t}{15}$ c) $\frac{9q}{18} + \frac{8q}{18} = \frac{17q}{18}$
d) $\frac{4e}{36} + \frac{27e}{36} = \frac{31e}{36}$ e) $\frac{27y}{30} - \frac{20y}{30} = \frac{7y}{30}$ f) $\frac{49a}{70} - \frac{10a}{70} = \frac{39a}{70}$

3: a) $\frac{3k}{12} + \frac{24k - 8}{12} = \frac{27k - 8}{12}$
b) $\frac{30b + 45}{20} + \frac{2b}{20} = \frac{32b + 45}{20}$
c) $\frac{5w}{9} - \frac{3w - 3}{9} = \frac{2w + 3}{9}$
d) $\frac{5z}{6} - \frac{4z + 16}{6} = \frac{z - 16}{6}$
e) $\frac{15j - 10}{10} + \frac{3j}{10} = \frac{18j - 10}{10} = \frac{2(9j - 5)}{10} = \frac{9j - 5}{5}$
f) $\frac{3p}{8} - \frac{8p - 4}{8} = \frac{-5p + 4}{8} = \frac{-(5p - 4)}{8}$

4: a) $\frac{4s + 2}{12} + \frac{9s + 18}{12} = \frac{13s + 20}{12}$
b) $\frac{10m + 30}{15} - \frac{18m + 12}{15} = \frac{-8m + 18}{15} = \frac{-2(4m - 9)}{15}$
c) $\frac{3c - 9}{8} + \frac{4c - 6}{8} = \frac{7c - 15}{8}$
d) $\frac{5g - 10}{10} - \frac{4g + 4}{10} = \frac{g - 14}{10}$
e) $\frac{f - 4}{6} + \frac{9f + 3}{6} = \frac{10f - 1}{6}$
f) $\frac{6x - 6}{10} - \frac{2x - 1}{10} = \frac{4x - 5}{10}$