Adding and Subtracting Rational Functions

Work within a small group to answer these questions. Do not race through the exercises on your own. Always make sure that your entire group feels good about a question and answer before you move to the next exercise. Ask your group mates for explanations if you feel uncertain about something, and offer your explanations to others when you understand an exercise but someone else may not.

1. Add or subtract the fractions/rational expressions so that there is only one rational expression.

a) $\frac{2}{3}+\frac{1}{4}$

b) $\frac{3}{12}-\frac{5}{16}$

c) $\frac{8}{b^3}-\frac{5}{b^3}$

d) $\frac{2z}{4-z}-\frac{3z-4}{4-z}$

e) $\frac{4}{4-n}+\frac{3}{2-n}$

f) $\frac{x}{x+4}+\frac{x+1}{x}$

g) $\dfrac{3n}{(4n-3)^2} - \dfrac{1}{4n-3}$

h) $\dfrac{2x}{x-5} + \dfrac{2x-1}{3x^2-16x+5}$

i) $\dfrac{3}{(x-1)(x-2)} + \dfrac{4x}{(x+1)(x-2)}$

j) $\dfrac{3}{x^2-2x+1} - \dfrac{1}{x^2-3x+2}$

k) $-\dfrac{1}{x-5} - 2$

l) $\dfrac{3}{x+1} + 2$