Slack

6) $\sum_{k=1}^{4} \frac{1}{k^2+k}$ $= \left(\frac{1}{1^2+1}\right) + \left(\frac{1}{2^2+2}\right) + \left(\frac{1}{3^2+3}\right) + \left(\frac{1}{4^2+4}\right)$

$= \frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20}$

$= \frac{30}{60} + \frac{10}{60} + \frac{5}{60} + \frac{3}{60}$

$= \frac{48}{60} = \frac{4}{5}$

7) a) $\frac{8}{3} + \frac{5}{4} = \frac{32}{12} + \frac{15}{12} = \frac{47}{12}$

b) $\frac{5x}{8} - \frac{x}{3} = \frac{15x}{24} - \frac{8x}{24} = \frac{7x}{24}$

c) $-\frac{2}{n} - \frac{9}{4n} = -\frac{8}{4n} - \frac{9}{4n} = -\frac{17}{4n}$

8) a) $-\frac{8}{5} \cdot \left(-\frac{2}{7}\right) \cdot 15 = \frac{16}{35} \cdot 15^3 = \frac{48}{7}$

b) $\frac{11}{7} : \frac{5}{14} = \frac{11}{1} \cdot \frac{14^2}{5} = \frac{22}{5}$

c) $\frac{a}{3c} : \frac{5b}{9c} = \frac{a}{1} \cdot \frac{3}{5b} = \frac{3ac}{5bc}$