

$$(1.) \frac{5}{3} + \frac{2}{3(p-4)} = \frac{5(p-4)}{3(p-4)} + \frac{2}{3(p-4)} = \frac{5p-20+2}{3(p-4)}$$

$$= \frac{5p-18}{3(p-4)}$$

$$(2.) \frac{4k}{k+2} - \frac{k+2}{k+3} = \frac{4k(k+3)}{(k+2)(k+3)} - \frac{(k+2)(k+2)}{(k+2)(k+3)} = \frac{4k^2+12k - (k^2+4k+4)}{(k+2)(k+3)}$$

$$= \frac{4k^2+12k-k^2-4k-4}{(k+2)(k+3)} = \frac{3k^2+8k-4}{(k+2)(k+3)}$$

$$(3.) \frac{1}{k+2} \cdot \frac{9k+18}{48} = \frac{1}{k+2} \cdot \frac{9(k+2)}{48} = \frac{9}{48} = \frac{3}{16}$$

$$(4.) \frac{m+8}{m^2-11m+10} \cdot \frac{m^2-11m+10}{7} = \frac{m+8}{7}$$

$$(5.) \frac{a-7}{a^2-2a+35} \cdot \frac{10a-40}{a^2+14a+45} = \frac{a-7}{(a-7)(a+5)} \cdot \frac{(a+9)(a+5)}{10(a+5)} = \frac{a+9}{10(a+5)}$$

$$(6.) \frac{6n-18}{7n-42} \cdot \frac{6n+12}{n^2-4n-12} = \frac{6(n-3)}{7(n-6)} \cdot \frac{(n-6)(n+2)}{6(n+2)} = \frac{n-3}{7}$$