(13)

$$\frac{3(x+2)^2(x-3)^2 - (x+2)^3(2)(x-3)}{(x-3)^4}$$

$$\frac{(x+2)^2(x-3)\left[3(x-3) - (x+2)(2)\right]}{(x-3)^4}$$

$$\frac{(x+2)^2(x-3)(3x-9-2x-4)}{(x-3)^4}$$

$$\frac{(x+2)^2(x-3)(x-13)}{(x-3)^4}$$

$$\boxed{\frac{(x+2)^2(x-13)}{(x-3)^3}}$$

(14)

$$\frac{3(x+2)^2 - 6x(x+2)}{x+2}$$

$$\frac{3(x+2)\left[(x+2) - 2x\right]}{(x+2)}$$

$$3(x+2-2x)$$

$$\boxed{3(-x+2)}$$