ejercio ① $n = 10$

$k = 4$

$$\frac{n!}{(n-k)!} = \frac{10!}{(10-4)!} = \frac{3628800}{720} = \boxed{5040} \quad R/=$$

ejercio ②

$n = 3$

$k = 1$

$$\frac{n!}{(n-k)!} = \frac{3!}{(3-1)!} = \frac{6}{2} = \boxed{3} \quad R/=$$

ejercio ③

$k = 1$

$n = 6 + 4 + 5 = 5$

$$\frac{n!}{(n-k)!} = \frac{15!}{(15-1)!} = \frac{15!}{14!} = \boxed{15} \quad R/=$$

Ejercio ④

$\frac{n!}{(n-k)!}$ $\quad n = 20$ $\quad k = 2$

$\frac{20!}{(20-2)!} = \frac{20!}{18!} = \boxed{380}$ R/=

ejercio ⑤

$X = 3 \cdot 2 \cdot 5 = \boxed{30}$ R/=

ejercio ⑥

$Y = 4 \cdot 6 \cdot 5 = \boxed{120}$ R/=