

Factorisation Exercises

$$① \quad 3a + 9b \div 3 = 3(a+3b) \quad \checkmark$$

$$② \quad 4m - 20n \div 4 = 4(m-5n) \quad \checkmark$$

$$③ \quad 15q + 5q \div 5q = 20q \quad \checkmark$$

$$④ \quad 3tu + 3tv \div 3t = 3t(u+v) \quad \checkmark$$

$$⑤ \quad 4ab + 12a^2 \div 4a = 4a(b+3a) \quad \checkmark$$

$$⑥ \quad 8pq - 10p^2 \div 2p = 2p(4q-5p) \quad \checkmark$$

$$⑦ \quad 10xy - 9x^2 \div x = x(10y-9x) \quad \checkmark$$

$$⑧ \quad 27y^2 - 18xy \div 9y = 9y(3y-2x) \quad \checkmark$$

$$⑨ \quad 30t^3 + 6t^2 \div 6t^2 = 6t^2(5t+1) \quad \checkmark$$

$$⑩ \quad 16p^3q + 15p^2q \div p^2q = p^2q(16p+15) \quad \checkmark$$

$$⑪ \quad 18z^3 - 12z^2 \div 6z^2 = 6z^2(3z-2) \quad \checkmark$$

$$\begin{aligned} ⑫ \quad 4(b-c) + 3(b-c) &= 4b-4c+3b-3c \\ &= 7(b-c) \quad \checkmark \end{aligned}$$

$$\begin{aligned} ⑬ \quad 2t(m+n) + 3t(n+m) &= 2tm + 2tn + 3tn + 3tm \\ &= 5tm + 5tn \\ &= 5t(m+n) \quad \checkmark \end{aligned}$$

$$\begin{aligned} ⑭ \quad 4pr + 3qr + 4ps + 3qs &= 4pr + 4ps + 3qr + 3qs \\ &= (4p+3q)(r+s) \quad \checkmark \end{aligned}$$

$$\begin{aligned} ⑮ \quad 2zx - 5yz + 2xt - 5yt &= 2zx + 2xt - 5yz - 5yt \\ &= (2x-5y)(z+t) \quad \checkmark \end{aligned}$$

$$\begin{aligned} ⑯ \quad 20km + 15ln + 20kn + 15lm &= (20k+15l)(m+n) \quad \checkmark \end{aligned}$$

$$\begin{aligned} ⑰ \quad 8kl + 12ml - 12mn - 8kn &= (8k+12m)(l-n) \quad \checkmark \\ &= 4(2k+3m)(l-n) \quad \checkmark \end{aligned}$$

Faktorisierung Exercises

$$\begin{aligned} (18) \quad x^2 + 7x + 12 \\ = (x+3)(x+4) \quad \checkmark \end{aligned}$$

$$\begin{aligned} (19) \quad x^2 + 10x + 24 \\ = (x+4)(x+6) \quad \checkmark \end{aligned}$$

$$\begin{aligned} (20) \quad a^2 + 11a + 18 \\ = (a+9)(a+2) \quad \checkmark \end{aligned}$$

$$\begin{aligned} (21) \quad x^2 + x - 12 \\ = (x+4)(x-3) \quad \checkmark \end{aligned}$$