Factorisation Exercises

① $3a + 9b \div 3 = 3(a+3b)$ ✓

② $4m - 20n \div 4 = 4(m-5n)$ ✓

③ $15q + 5q = 20q$ ✓

④ $3tv + 3tv \div 3t = 3t(v+v)$ ✓

⑤ $4ab + 12a^2 \div 4a = 4a(b+3a)$ ✓

⑥ $8pq - 10p^2 \div 2p = 2p(4q-5p)$ ✓

⑦ $10xy - 9x^2 \div x = x(10y-9x)$ ✓

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

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

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

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

⑫ $4(b-c) + 3(b-c)$
$= 4b - 4c + 3b - 3c$
$= 7(b-c)$ ✓

⑬ $2t(m+n) + 3t(n+m)$
$= 2tm + 2tn + 3tn + 3tm$
$= 5tm + 5tn$
$= 5t(m+n)$ ✓

⑭ $4pr + 3qr + 4ps + 3qs$
$= 4pr + 4ps + 3qr + 3qs$
$= (4p+3q)(r+s)$ ✓

⑮ $2zx - 5yz + 2xt - 5yt$
$= 2zx + 2xt - 5yz - 5yt$
$= (2x-5y)(z+t)$ ✓

⑯ $20km + 15lm + 20kn + 15ln$
$= (20k + 15l)(m+n)$ ✓

⑰ $8kl + 12mt - 12mn - 8kn$
$(8k + 12m)(l-n)$ ✓
$= 4(2k+3m)(l-n)$

Factorisation Exercises

(18) $x^2 + 7x + 12$

$= (x+3)(x+4)$ ✓

(19) $x^2 + 10x + 24$

$= (x+4)(x+6)$ ✓

(20) $a^2 + 11a + 18$

$= (a+9)(a+2)$ ✓

(21) $x^2 + x - 12$

$= (x+4)(x-3)$ ✓