Factoring by Grouping

1) $21uv + 8b + 3u + 56bv$

2) $28xy - 7k - 49x + 4ky$

3) $126r^5 - 144r^4 - 210r^3 + 240r^2$

4) $28x^4 + 112x^3 - 21x^2 - 84x$

5) $70n^4 + 40n^3 + 28n^2 + 16n$

6) $56n^3 + 64n^2 + 70n + 80$

7) $125m^2 n - 30mp - 50m^2 + 75mpn$

8) $15xy - 12vx - 12x^2 + 15vy$

9) $45uv - 125bu - 75u^2 + 75bv$

10) $32u^2 v - 12u^3m + 48u^4 - 8umv$

Answers

1. $(3u + 8b)(7v + 1)$

2. $(7x + k)(4y - 7)$

3. $6r^2(3r^2 - 5)(7r - 8)$

4. $7x(4x^2 - 3)(x + 4)$

5. $2n(5n^2 + 2)(7n + 4)$

6. $2(4n^2 + 5)(7n + 8)$

7. $5m(5m + 3p)(5n - 2)$

8. $3(x + v)(5y - 4x)$

9. $5(3u + 5b)(3v - 5u)$

10. $4u(4u - m)(2v + 3u^2)$