多項式の計算（解答と解説）

1 解答 (1) $3x-2y$ (2) $7a-6b$

(1) $(x-3y)+(2x+y)=x-3y+2x+y$
$=x+2x-3y+y$
$=3x-2y$

(2) $(5a-2b)+(2a-4b)=5a-2b+2a-4b$
$=5a+2a-2b-4b$
$=7a-6b$

2 解答 (1) $10x+7y$ (2) $-x+y$ (3) $7a-7b$ (4) $4a+2b$
(5) $5x^2-xy$ (6) $ab+3bc+ca$

(1) $(3x+y)+(7x+6y)=3x+y+7x+6y$
$=3x+7x+y+6y$
$=10x+7y$

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

(3) $(3a-2b)+(4a-5b)=3a-2b+4a-5b$
$=3a+4a-2b-5b$
$=7a-7b$

(4) $8a+(-4a+2b)=8a-4a+2b$
$=4a+2b$

(5) $(3x^2-2xy+4y^2)+(2x^2+xy-4y^2)=3x^2-2xy+4y^2+2x^2+xy-4y^2$
$=3x^2+2x^2-2xy+xy+4y^2-4y^2$
$=5x^2-xy$

(6) $(-2ab+4bc-ca)+(3ab-bc+2ca)=-2ab+4bc-ca+3ab-bc+2ca$
$=-2ab+3ab+4bc-bc-ca+2ca$
$=ab+3bc+ca$

3 解答 (1) $-2x+y$ (2) $2a+3b$

(1) $(4x+3y)-(6x+2y)=4x+3y-6x-2y$
$=4x-6x+3y-2y$
$=-2x+y$

(2) $(7a-3b)-(5a-6b)=7a-3b-5a+6b$
$=7a-5a-3b+6b$
$=2a+3b$

4 解答 (1) $3x+3y$ (2) $3a-3b$ (3) $2x+11y$ (4) $-a-6b$
(5) $x^2-4xy-3y^2$ (6) $-2ab+bc$

(1) $(7x+2y)-(4x-y)=7x+2y-4x+y$
$=7x-4x+2y+y$
$=3x+3y$

(2) $(4a-7b)-(a-4b)=4a-7b-a+4b$
$=4a-a-7b+4b$
$=3a-3b$

(3) $(5x+4y)-(3x-7y)=5x+4y-3x+7y$
$=5x-3x+4y+7y$
$=2x+11y$

(4) $(-4a-7b)-(-b-3a)=-4a-7b+b+3a$
$=-4a+3a-7b+b$
$=-a-6b$

(5) $(6x^2-xy-2y^2)-(5x^2+3xy+y^2)=6x^2-xy-2y^2-5x^2-3xy-y^2$
$=6x^2-5x^2-xy-3xy-2y^2-y^2$
$=x^2-4xy-3y^2$

(6) $(5ab-bc+3ca)-(7ab+3ca-2bc)=5ab-bc+3ca-7ab-3ca+2bc$
$=5ab-7ab-bc+2bc+3ca-3ca$
$=-2ab+bc$