

解答

1. 式の展開（3項）

- (1) $-18x^2 + 3y^2 - 2z^2 + 25xy - yz + 20zx$
 (3) $-7x^2 + 12y^2 - 16z^2 + 40xy - 4yz - 58zx$
 (5) $x^2 + 64y^2 + z^2 - 16xy + 16yz - 2zx$
 (7) $2x^2 - 12y^2 + 16z^2 + 5xy - 26yz - 12zx$
 (9) $4x^2 + y^2 + 25z^2 - 4xy - 10yz + 20zx$
 (11) $9x^2 - y^2 + z^2 - 6zx$
 (13) $36x^2 + y^2 + 9z^2 - 12xy + 6yz - 36zx$
 (15) $x^2 - 25y^2 + 9z^2 - 6zx$

- (2) $-x^2 + 4y^2 + 9z^2 + 12yz$
 (4) $-x^2 - 25y^2 + 9z^2 + 10xy$
 (6) $4x^2 + 2y^2 - 8z^2 - 9xy - 6yz - 4zx$
 (8) $-4x^2 - 4y^2 + z^2 - 8xy$
 (10) $9x^2 - y^2 - 4z^2 - 4yz$
 (12) $-2x^2 - 14y^2 + 7z^2 + 16xy + 47yz - 5zx$
 (14) $x^2 - 4y^2 - 4z^2 - 8yz$
 (16) $4x^2 - y^2 - z^2 + 2yz$

2. 式の展開（3項）

- (1) $-7x^2 - 12y^2 - 8z^2 + 44xy + 20yz - 30zx$
 (3) $4x^2 + 9y^2 + 4z^2 - 12xy + 12yz - 8zx$
 (5) $x^2 - 16y^2 + z^2 - 2zx$
 (7) $x^2 + y^2 + 16z^2 + 2xy + 8yz + 8zx$
 (9) $x^2 + 9y^2 + 81z^2 + 6xy + 54yz + 18zx$
 (11) $x^2 - 9y^2 + 9z^2 + 6zx$
 (13) $-7x^2 + 2y^2 - 40z^2 + 13xy + 2yz - 61zx$
 (15) $-9x^2 + y^2 + z^2 + 2yz$

- (2) $8x^2 - y^2 + 42z^2 + 7xy + yz - 62zx$
 (4) $x^2 - y^2 - 9z^2 - 6yz$
 (6) $6x^2 - 5y^2 - 14z^2 - 7xy - 37yz + 17zx$
 (8) $49x^2 + 4y^2 + 4z^2 + 28xy + 8yz + 28zx$
 (10) $4x^2 + y^2 + z^2 - 4xy + 2yz - 4zx$
 (12) $-10x^2 + 16y^2 - 3z^2 + 36xy - 22yz + 11zx$
 (14) $4x^2 + y^2 - 4z^2 - 4xy$
 (16) $-4x^2 + 9y^2 + z^2 - 6yz$

3. 式の展開（3項）

- (1) $x^2 - 9y^2 - z^2 - 6yz$
 (3) $4x^2 + 9y^2 + 4z^2 + 12xy + 12yz + 8zx$
 (5) $x^2 + y^2 + 9z^2 - 2xy + 6yz - 6zx$
 (7) $9x^2 + y^2 + 64z^2 + 6xy - 16yz - 48zx$
 (9) $64x^2 + 4y^2 + z^2 + 32xy - 4yz - 16zx$
 (11) $36x^2 + y^2 + 4z^2 - 12xy - 4yz + 24zx$
 (13) $x^2 + 16y^2 + 25z^2 + 8xy + 40yz + 10zx$
 (15) $4x^2 + y^2 - 4z^2 + 4xy$

- (2) $-16x^2 - 4y^2 + 2z^2 + 34xy + 7yz + 4zx$
 (4) $-10x^2 + 2y^2 - 35z^2 + 8xy - 9yz + 39zx$
 (6) $-x^2 + y^2 + 9z^2 + 6yz$
 (8) $25x^2 - y^2 + 4z^2 + 20zx$
 (10) $-16x^2 + 12y^2 - z^2 - 16xy + 4yz + 8zx$
 (12) $x^2 + 9y^2 + 9z^2 + 6xy - 18yz - 6zx$
 (14) $x^2 - 16y^2 - z^2 + 8yz$
 (16) $4x^2 + 9y^2 - 4z^2 - 12xy$

4. 式の展開（3項）

- (1) $25x^2 - 4y^2 + z^2 - 10zx$
 (3) $8x^2 - 7y^2 + 10z^2 + 55xy - 9yz - 42zx$
 (5) $36x^2 + 4y^2 + z^2 + 24xy - 4yz - 12zx$
 (7) $4x^2 - 9y^2 - 9z^2 - 18yz$
 (9) $x^2 + y^2 + 9z^2 + 2xy - 6yz - 6zx$
 (11) $16x^2 + y^2 + 9z^2 + 8xy - 6yz - 24zx$
 (13) $x^2 + y^2 + 4z^2 + 2xy - 4yz - 4zx$
 (15) $-6x^2 - 7y^2 - 30z^2 + 43xy + 41yz - 41zx$

- (2) $3x^2 - 16y^2 - 7z^2 + 8xy - 32yz + 20zx$
 (4) $9x^2 + y^2 + 4z^2 - 6xy + 4yz - 12zx$
 (6) $4x^2 + y^2 + 4z^2 + 4xy + 4yz + 8zx$
 (8) $x^2 + 9y^2 + 16z^2 - 6xy + 24yz - 8zx$
 (10) $4x^2 + 25y^2 + z^2 + 20xy + 10yz + 4zx$
 (12) $-15x^2 - y^2 - 18z^2 + 8xy + 11yz - 51zx$
 (14) $9x^2 + y^2 + 81z^2 + 6xy + 18yz + 54zx$
 (16) $-x^2 - 9y^2 + 4z^2 + 6xy$