

問題番号 09M0109_01 レベル ☆☆☆	うんな進学塾 中3 第1章 多項式の計算 ⑨ 項の並び替え No.1 解答	授業動画QR 
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1. 次の式を工夫して計算しなさい。

$$(1) (a - 4)(-4 - a) \\ = -(a - 4)(a + 4) = -(a^2 - 16) = -a^2 + 16$$

$$(2) 19 \times 13 + 13 \times 11 \\ = 13(19 + 11) = 13 \times 30 = 390$$

$$(3) (x + 2y)(x^2 + 4y^2)(x - 2y) \\ = (x + 2y)(x - 2y)(x^2 + 4y^2) \\ = (x^2 - 4y^2)(x^2 + 4y^2) = x^4 - 16y^4$$

$$(4) 31^2 \\ = (30 + 1)^2 = 30^2 + 2 \times 30 \times 1 + 1^2 \\ = 900 + 60 + 1 = 961$$

$$(5) 98 \times 102 \\ = (100 - 2)(100 + 2) = 100^2 - 2^2 \\ = 10000 - 4 = 9996$$

$$(6) 2.1 \times 1.9 \\ = (2 + 0.1)(2 - 0.1) = 2^2 - 0.1^2 = 4 - 0.01 \\ = 3.99$$

$$(7) (3a + 1)^2 - (3a - 1)^2 \\ = (3a + 1 + 3a - 1)(3a + 1 - (3a - 1)) \\ = 6a \times 2 = 12a$$

$$(8) 36^2 - 14^2 \\ (36 + 14)(36 - 14) = 50 \times 22 = 1100$$

(1) $-a^2 + 16$	(2) 390
(3) $x^2 - 16y^4$	(4) 961
(5) 9996	(6) 3.99
(7) $12a$	(8) 1100

2. $x = 24, y = 19$ の時の次の式の値を求めなさい。

$$(1) x^2 - 2xy + y^2 \\ = (x - y)^2 = (24 - 19)^2 = 5^2 = 25$$

$$(2) x^2 + 2x - 24 + y^2 - 8y - 9 \\ = (x + 6)(x - 4) + (y - 9)(y + 1) \\ = (24 + 6)(24 - 4) + (19 - 9)(19 + 1) \\ = 30 \times 20 + 10 \times 20 = 600 + 200 = 800$$

(1) 25	(2) 800
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