

日にち

今日は何の日？

式の展開と因数分解

組 番 氏名

本時の目標

Q1 次の計算をしてみましょう。7・8年生の復習問題です！

(1) $2x \times 4$

(2) $4x \times (-3y)$

(3) $(-6a) \times 5a$

(4) $(-5x)^2$

(5) $5(2a - 3b)$

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

(7) $\frac{5x+3}{3} \times 6$

(8) $\frac{3x+2y}{2} + \frac{2x-y}{3}$

教科書の方法を参考に解いてみましょう。

例1 $(2a + b) \times 3a$
=

例2 $-5x(x - 2y)$
=

Q2 次の式を計算しなさい。

(1) $(2x + y) \times 6x$

(2) $(4a - b) \times 3a$

(3) $(6a - 5b) \times (-2b)$

(4) $5x(2x - 1)$

(5) $3x(x + 2y)$

(6) $-3a(7a + 8b)$

(7) $-2x(-2x + 3y)$

(8) $(x - 2y - 3) \times 4x$

(9) $-3x(3x - 4y + 2)$

(10) $2a(-a + 2b - 1)$

【解答】

Q1 次の計算をしてみましょう。7・8年生の復習問題です！

$$(1) \quad 2x \times 4 \\ = 8x$$

$$(2) \quad 4x \times (-3y) \\ = -12xy$$

$$(3) \quad (-6a) \times 5a \\ = -30a^2$$

$$(4) \quad (-5x)^2 \\ = 25x^2$$

$$(5) \quad 5(2a - 3b) \\ = 5 \times 2a + 5 \times (-3b) \\ = 10a - 15b$$

$$(6) \quad 3(2x + 1) - 4(x - 6) \\ = 3 \times 2x + 3 \times 1 - 4 \times x - 4 \times (-6) \\ = 6x + 3 - 4x + 24 \\ = 6x - 4x + 3 + 24 \\ = 2x + 27$$

$$(7) \quad \frac{5x+3}{3} \times 6 \\ = (5x+3) \times 2 \\ = 5x \times 2 + 3 \times 2 \\ = 10x + 6$$

$$(8) \quad \frac{3x+2y}{2} + \frac{2x-y}{3} \\ = \frac{3(3x+2y) + 2(2x-y)}{6} \\ = \frac{9x+6y+4x-2y}{6} \\ = \frac{13x+4y}{6}$$

$$\begin{aligned} \text{例1 } (2a+b) \times 3a \\ &= 2a \times 3a + b \times 3a \\ &= 6a^2 + 3ab \end{aligned}$$

$$\begin{aligned} \text{例2 } -5x(x-2y) \\ &= -5x \times x + (-5x) \times (-2y) \\ &= -5x^2 + 10xy \end{aligned}$$

Q2 次の式を計算しなさい。

$$\begin{aligned} (1) (2x+y) \times 6x \\ &= 2x \times 6x + y \times 6x \\ &= 12x^2 + 6xy \end{aligned}$$

$$\begin{aligned} (2) (4a-b) \times 3a \\ &= 4a \times 3a + (-b) \times 3a \\ &= 12a^2 - 3ab \end{aligned}$$

$$\begin{aligned} (3) (6a-5b) \times (-2b) \\ &= 6a \times (-2b) + (-5b) \times (-2b) \\ &= -12ab + 10b^2 \end{aligned}$$

$$\begin{aligned} (4) 5x(2x-1) \\ &= 5x \times 2x + 5x \times (-1) \\ &= 10x^2 - 5x \end{aligned}$$

$$\begin{aligned} (5) 3x(x+2y) \\ &= 3x \times x + 3x \times 2y \\ &= 3x^2 + 6xy \end{aligned}$$

$$\begin{aligned} (6) -3a(7a+8b) \\ &= -3a \times 7a + (-3a) \times 8b \\ &= -21a^2 - 24ab \end{aligned}$$

$$\begin{aligned} (7) -2x(-2x+3y) \\ &= (-2x) \times (-2x) + (-2x) \times 3y \\ &= 4x^2 - 6xy \end{aligned}$$

$$\begin{aligned} (8) (x-2y-3) \times 4x \\ &= x \times 4x + (-2y) \times 4x + (-3) \times 4x \\ &= 4x^2 - 8xy - 12x \end{aligned}$$

$$\begin{aligned} (9) -3x(3x-4y+2) \\ &= (-3x) \times 3x + (-3x) \times (-4y) + (-3x) \times 2 \\ &= -9x^2 + 12xy - 6x \end{aligned}$$

$$\begin{aligned} (10) 2a(-a+2b-1) \\ &= 2a \times (-a) + 2a \times 2b + 2a \times (-1) \\ &= -2a^2 + 4ab - 2a \end{aligned}$$