

文字と式 [1次式と数の乗法]

<演習問題>

次の計算をせよ。

(1) $3a \times 4$

(11) $-(-4a + 7)$

(2) $(-2) \times 5x$

(12) $\frac{2x+1}{3} \times 6$

(3) $2x \times (-7)$

(4) $(-6a) \times (-5)$

(5) $(-2) \times (-2x)$

(13) $\frac{5x-2}{4} \times (-8)$

(6) $3(a + 7)$

(7) $(2x + 4) \times 6$

(14) $24 \times \frac{7y+8}{6}$

(8) $-3(2x - 1)$

(9) $(7x + 5) \times (-4)$

(15) $(-4) \times \frac{5a-7}{2}$

(10) $-(3x + 1)$

文字と式 [1次式と数の乗法]

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次の計算をせよ。

(1) $3a \times 4$

$$3a \times 4 = 12a$$

(2) $(-2) \times 5x$

$$(-2) \times 5x = -10x$$

(3) $2x \times (-7)$

$$2x \times (-7) = -14x$$

(4) $(-6a) \times (-5)$

$$(-6a) \times (-5) = 30a$$

(5) $(-2) \times (-2x)$

$$(-2) \times (-2x) = 4x$$

(6) $3(a + 7)$

$$\begin{aligned} 3(a + 7) &= 3 \times a + 3 \times 7 \\ &= 3a + 21 \end{aligned}$$

(7) $(2x + 4) \times 6$

$$\begin{aligned} (2x + 4) \times 6 &= 2x \times 6 + 4 \times 6 \\ &= 12x + 24 \end{aligned}$$

(8) $-3(2x - 1)$

$$\begin{aligned} -3(2x - 1) &= -3\{2x + (-1)\} \\ &= -3 \times 2x + (-3) \times (-1) \\ &= -6x + 3 \end{aligned}$$

(9) $(7x + 5) \times (-4)$

$$\begin{aligned} (7x + 5) \times (-4) &= 7x \times (-4) + 5 \times (-4) \\ &= -28x - 20 \end{aligned}$$

(10) $-(3x + 1)$

$$\begin{aligned} -(3x + 1) &= (-1) \times (3x + 1) \\ &= (-1) \times 3x + (-1) \times 1 \\ &= -3x - 1 \end{aligned}$$

(11) $-(-4a + 7)$

$$\begin{aligned} -(-4a + 7) &= (-1) \times (-4a + 7) \\ &= (-1) \times (-4a) + (-1) \times 7 \\ &= 4a - 7 \end{aligned}$$

(12) $\frac{2x+1}{3} \times 6$

$$\begin{aligned} \frac{2x+1}{3} \times 6 &= \frac{(2x+1) \times 6}{3} \\ &= (2x+1) \times 2 \\ &= 2x \times 2 + 1 \times 2 \\ &= 4x + 2 \end{aligned}$$

(13) $\frac{5x-2}{4} \times (-8)$

$$\begin{aligned} \frac{5x-2}{4} \times (-8) &= \frac{(5x-2) \times (-8)}{4} \\ &= (5x-2) \times (-2) \\ &= 5x \times (-2) - 2 \times (-2) \\ &= -10x + 4 \end{aligned}$$

(14) $24 \times \frac{7y+8}{6}$

$$\begin{aligned} 24 \times \frac{7y+8}{6} &= \frac{24 \times (7y+8)}{6} \\ &= 4 \times (7y+8) \\ &= 4 \times 7y + 4 \times 8 \\ &= 28y + 32 \end{aligned}$$

(15) $(-4) \times \frac{5a-7}{2}$

$$\begin{aligned} (-4) \times \frac{5a-7}{2} &= \frac{(-4) \times (5a-7)}{2} \\ &= (-2) \times (5a-7) \\ &= (-2) \times \{5a + (-7)\} \\ &= (-2) \times 5a + (-2) \times (-7) \\ &= -10a + 14 \end{aligned}$$