

・ルーズリーフやノートに解いて、再開後の授業で持参して下さい。  
 ・未だ習っていない部分については、解かないで大丈夫です。

1. **【解答】**  $(x-3)(2x+1)$

**【解説】**

$2x^2 - 5x - 3 = (x-3)(2x+1)$

$$\begin{array}{r} 1 \times -3 \rightarrow -6 \\ 2 \times 1 \rightarrow 2 \\ \hline 2 \quad -3 \quad -5 \end{array}$$

2. **【解答】**  $(x-2)(x+5)$

**【解説】**

かけて  $-10$  になる 2 つの整数の組で、たして  $3$  になるものは  $-2$  と  $5$

よって  $x^2 + 3x - 10 = (x-2)(x+5)$

3. **【解答】** (1)  $2x(x-3)$  (2)  $(x-3)^2$  (3)  $(x+3)(x-3)$

**【解説】**

(1)  $2x^2 - 6x = 2x \times x - 2x \times 3 = 2x(x-3)$

(2)  $x^2 - 6x + 9 = x^2 - 2 \times x \times 3 + 3^2 = (x-3)^2$

(3)  $x^2 - 9 = x^2 - 3^2 = (x+3)(x-3)$

4. **【解答】** (1)  $x^2 - x - 6$  (2)  $8x^2 + 22x + 15$

**【解説】**

(1)  $(x+2)(x-3) = x^2 + (2-3)x + 2 \times (-3) = x^2 - x - 6$

(2)  $(2x+3)(4x+5) = (2 \times 4)x^2 + (2 \times 5 + 3 \times 4)x + 3 \times 5 = 8x^2 + 22x + 15$

5. **【解答】** (1)  $x^2 + 10x + 25$  (2)  $4x^2 - 12x + 9$  (3)  $x^2 - 36$

**【解説】**

(1)  $(x+5)^2 = x^2 + 2 \times x \times 5 + 5^2 = x^2 + 10x + 25$

(2)  $(2x-3)^2 = (2x)^2 - 2 \times 2x \times 3 + 3^2 = 4x^2 - 12x + 9$

(3)  $(x+6)(x-6) = x^2 - 6^2 = x^2 - 36$

6. **【解答】** (1)  $2x^2 + 3x - 2$  (2)  $x^3 - x^2 - 11x + 3$

**【解説】**

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

$= 2x^2 - x + 4x - 2$

$= 2x^2 + 3x - 2$

(2)  $(x+3)(x^2 - 4x + 1) = x(x^2 - 4x + 1) + 3(x^2 - 4x + 1)$

$= x^3 - 4x^2 + x + 3x^2 - 12x + 3$

$= x^3 - x^2 - 11x + 3$

7. **【解答】**  $8x^2 - 10x$

**【解説】**

$2x(4x-5) = 2x \times 4x - 2x \times 5 = 8x^2 - 10x$

8. **【解答】** (1)  $a^6$  (2)  $x^{10}$  (3)  $4x^2$  (4)  $-12x^3$

**【解説】**

(1)  $a^2 \times a^4 = a^{2+4} = a^6$

(2)  $(x^2)^5 = x^{2 \times 5} = x^{10}$

(3)  $(-2x)^2 = (-2)^2 x^2 = 4x^2$

(4)  $4x \times (-3x^2) = 4 \times (-3) \times x \times x^2 = -12x^3$

9. **【解答】** (1)  $3x^2 + x + 3$  (2)  $x^2 + 5x + 5$  (3)  $x^2 - 7x + 7$

**【解説】**

(1)  $(2x^2 + 3x + 4) + (x^2 - 2x - 1) = 2x^2 + 3x + 4 + x^2 - 2x - 1$

$= 2x^2 + x^2 + 3x - 2x + 4 - 1$

$= 3x^2 + x + 3$

(2)  $(2x^2 + 3x + 4) - (x^2 - 2x - 1) = 2x^2 + 3x + 4 - x^2 + 2x + 1$

$= 2x^2 - x^2 + 3x + 2x + 4 + 1$

$= x^2 + 5x + 5$

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

$= 3x^2 - 2x^2 - 3x - 4x + 1 + 6$

$= x^2 - 7x + 7$

10. **【解答】** (1)  $a + b + c + d$  (2)  $a + b - c - d$  (3)  $3x - 6$  (4)  $-4x^2 + 12x - 8$

**【解説】**

(1)  $(a+b) + (c+d) = a + b + c + d$

(2)  $(a+b) - (c+d) = a + b - c - d$

(3)  $3(x-2) = 3x - 6$

(4)  $-4(x^2 - 3x + 2) = -4x^2 + 12x - 8$

11. **【解答】** (1)  $9x$ , 次数は  $1$  (2)  $3x^2 - 3x + 1$ , 次数は  $2$

**【解説】**

(1)  $4x + 5x = (4+5)x = 9x$

次数は  $1$

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

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

$= 3x^2 - 3x + 1$

次数は  $2$

12. **【解答】** (1)  $4a^2$  (2)  $10a + 3b$

**【解説】**

(1)  $a \times a \times 4 = 4a^2$

(2)  $a \times 10 + b \times 3 = 10a + 3b$

13. **【解答】** (1)  $a \times a \times 4$  ( $\text{cm}^3$ ) (2)  $a \times 10 + b \times 3$  (円)

**【解説】**

(1)  $a \times a \times 4$  ( $\text{cm}^3$ )

(2)  $a \times 10 + b \times 3$  (円)

14. **【解答】**  $-4$

**【解説】**

$(-2) \times 3 + 4 \div 2 = -6 + 2 = -4$

15. **【解答】** (1)  $\frac{14}{15}$  (2)  $\frac{1}{12}$

**【解説】**

(1)  $\frac{6}{5} \times \frac{7}{9} = \frac{6 \times 7}{5 \times 9} = \frac{14}{15}$

(2)  $\frac{2}{15} \div \frac{8}{5} = \frac{2}{15} \times \frac{5}{8} = \frac{2 \times 5}{15 \times 8} = \frac{1}{12}$

16. **【解答】**  $\frac{7}{8}$

**【解説】**

$\frac{3}{4} + \frac{1}{8} = \frac{3 \times 2}{4 \times 2} + \frac{1}{8} = \frac{6}{8} + \frac{1}{8} = \frac{6+1}{8} = \frac{7}{8}$

17. **【解答】**  $9$

**【解説】**

$(-3)^2 = (-3) \times (-3) = 9$

18. **【解答】** (1)  $-18$  (2)  $18$

**【解説】**

(1)  $6 \times (-3) = -(6 \times 3) = -18$

(2)  $(-6) \times (-3) = +(6 \times 3) = 18$

19. **【解答】** (1)  $-2$  (2)  $6$

**【解説】**

(1)  $2 + (-4) = 2 - 4 = -2$

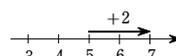
(2)  $2 - (-4) = 2 + 4 = 6$

20. **【解答】** (1)  $7$  (2)  $-3$  (3)  $3$  (4)  $-7$

**【解説】**

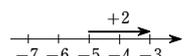
(1)  $5 + 2$

$= 7$



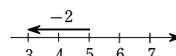
(2)  $-5 + 2$

$= -3$



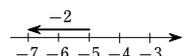
(3)  $5 - 2$

$= 3$



(4)  $-5 - 2$

$= -7$



21. **【解答】**  $x^2 + 2xy + y^2 - 2x - 2y + 1$

**【解説】**

$x + y$  を  $M$  でおきかえると  $(x + y - 1)^2 = (M - 1)^2$

$= M^2 - 2M + 1$

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

$= x^2 + 2xy + y^2 - 2x - 2y + 1$

22. **【解答】**  $(x + y)(x + y + 4)$

**【解説】**

$x + y$  を  $M$  でおきかえると  $(x + y)^2 + 4(x + y) = M^2 + 4M = M(M + 4)$

$= (x + y)(x + y + 4)$