| | | |
|---|---|---|
| **計算・方程式（３年「式の展開」後）　01** | | 氏名 |

◆①〜⑱の計算をせよ。また、⑲〜⑳の方程式を解け。

| ① $-5+9$<br><br>$\quad=4$ | ② $-8\times7$<br><br>$\quad=-56$ | ③ $(-24)\div(-6)$<br><br>$\quad=4$ |
|---|---|---|
| ④ $8-3\times(-2)$<br><br>$\quad=8-(-6)$<br>$\quad=8+6$<br>$\quad=14$ | ⑤ $-\dfrac{2}{5}+\dfrac{3}{4}$<br><br>$\quad=-\dfrac{8}{20}+\dfrac{15}{20}=\dfrac{7}{20}$ | ⑥ $(-\dfrac{5}{7})\times(-\dfrac{21}{10})$<br><br>$\quad=\dfrac{5\times21}{7\times10}=\dfrac{1\times3}{1\times2}=\dfrac{3}{2}$ |
| ⑦ $-\dfrac{6}{5}\div\dfrac{9}{10}$<br><br>$\quad=-\dfrac{6\times10}{5\times9}=-\dfrac{2\times2}{1\times3}=-\dfrac{4}{3}$ | ⑧ $-0.4\times0.9$<br><br>$\quad=-0.36$ | ⑨ $7x-4y+5x+2y$<br><br>$\quad=7x+5x-4y+2y$<br>$\quad=12x-2y$ |
| ⑩ $36xy^2\div4xy\times7y$<br><br>$\quad=\dfrac{36xy^2\times7y}{4xy}$<br>$\quad=63y^2$ | ⑪ $17a^2b-3ab\times2a$<br><br>$\quad=17a^2b-6a^2b$<br>$\quad=11a^2b$ | ⑫ $5(2x+y)+3(3x-2y)$<br><br>$\quad=10x+5y+9x-6y$<br>$\quad=10x+9x+5y-6y$<br>$\quad=19x-y$ |
| ⑬ $-4x(6x-5y)$<br><br>$\quad=-24x^2+20xy$ | ⑭ $(24ab-16a)\div8a$<br><br>$\quad=3b-2$ | ⑮ $(a-3)(b+7)$<br><br>$\quad=ab+7a-3b-21$ |
| ⑯ $(x+6)(x+3)$<br><br>$\quad=x^2+9x+18$ | ⑰ $(x+5)^2$<br><br>$\quad=x^2+10x+25$ | ⑳ $\begin{cases} 3x+2y=5 & \cdots① \\ 2x-y=8 & \cdots② \end{cases}$<br><br>$②\times2$<br>$4x-2y=16\cdots②'$<br>$①+②'$<br>$\quad7x=21$<br>$\quad x=3$<br>$x=3$を②に代入<br>$2\times3-y=8$<br>$6-y=8$<br>$-y=8-6$<br>$-y=2$<br>$y=-2$<br>$(x,y)=(\,3\,,-2\,)$ |
| ⑱ $(x+3)(x-3)$<br><br>$\quad=x^2-9$ | ⑲ $7x-7=2x+13$<br><br>$7x-2x=13+7$<br>$5x=20$<br>$x=5$ | |

◆①～⑱の計算をせよ。また、⑲～⑳の方程式を解け。

| | | |
|---|---|---|
| ① $-6-7$ <br><br> $=-13$ | ② $-6\times9$ <br><br> $=-54$ | ③ $-24\div3$ <br><br> $=-8$ |
| ④ $16-10\div(-2)$ <br><br> $=16-(-5)$ <br> $=16+5$ <br> $=21$ | ⑤ $-\dfrac{1}{5}-\dfrac{2}{3}$ <br><br> $=-\dfrac{3}{15}-\dfrac{10}{15}=-\dfrac{13}{15}$ | ⑥ $\dfrac{10}{9}\times(-\dfrac{6}{5})$ <br><br> $=-\dfrac{10\times6}{9\times5}=-\dfrac{2\times2}{3\times1}=-\dfrac{4}{3}$ |
| ⑦ $(-\dfrac{15}{14})\div(-\dfrac{10}{21})$ <br><br> $=\dfrac{15\times21}{14\times10}=\dfrac{3\times3}{2\times2}=\dfrac{9}{4}$ | ⑧ $(-5.6)\div(-0.7)$ <br><br> $=8$ | ⑨ $7x-3y+6x-8y$ <br><br> $=7x+6x-3y-8y$ <br> $=13x-11y$ |
| ⑩ $-36x^2y\div4xy\div3x$ <br><br> $=-\dfrac{36x^2y}{4xy\times3x}$ <br> $=-3$ | ⑪ $10ab-6a^2b\div2a$ <br><br> $=10ab-3ab$ <br> $=7ab$ | ⑫ $5(3x-2y)-3(4x-y)$ <br><br> $=15x-10y-12x+3y$ <br> $=15x-12x-10y+3y$ <br> $=3x-7y$ |
| ⑬ $4x(9x-7y)$ <br><br> $=36x^2-28xy$ | ⑭ $(48a^2b-18ab)\div(-6ab)$ <br><br> $=-8a+3$ | ⑮ $(x-4)(y-3)$ <br><br> $=xy-3x-4y+12$ |
| ⑯ $(x-8)(x+3)$ <br><br> $=x^2-5x-24$ | ⑰ $(x-7)^2$ <br><br> $=x^2-14x+49$ | ⑳ $\begin{cases} 3x+y=11 &\cdots① \\ 2x+3y=12 &\cdots② \end{cases}$ <br><br> $①\times3$ <br> $9x+3y=33\cdots①'$ <br> $①'-②$ <br> $7x=21$ <br> $x=3$ <br> $x=3$を①に代入 <br> $3\times3+y=11$ <br> $9+y=11$ <br> $y=11-9$ <br> $y=2$ <br><br> $(x,y)=(3,2)$ |
| ⑱ $(x+6)(x-6)$ <br><br> $=x^2-36$ | ⑲ $7x+4=3x-8$ <br><br> $7x-3x=-8-4$ <br> $4x=-12$ <br> $x=-3$ | |

## 計算・方程式（３年「式の展開」後）　03　氏名

◆①～⑱の計算をせよ。また、⑲～⑳の方程式を解け。

| ① $-8-7$ | ② $-7 \times 6$ | ③ $(-27) \div (-3)$ |
|---|---|---|
| $= -15$ | $= -42$ | $= 9$ |

| ④ $7 - 3 \times (-3)$ | ⑤ $-\dfrac{1}{4} + \dfrac{2}{3}$ | ⑥ $-\dfrac{9}{14} \times \dfrac{7}{12}$ |
|---|---|---|
| $\begin{aligned} &= 7 - (-9) \\ &= 7 + 9 \\ &= 16 \end{aligned}$ | $= -\dfrac{3}{12} + \dfrac{8}{12} = \dfrac{5}{12}$ | $= -\dfrac{9 \times 7}{14 \times 12} = -\dfrac{3 \times 1}{2 \times 4} = -\dfrac{3}{8}$ |

| ⑦ $-\dfrac{4}{9} \div \dfrac{16}{15}$ | ⑧ $-0.8 \times 0.7$ | ⑨ $4x - 11y - 7x + 5y$ |
|---|---|---|
| $= -\dfrac{4 \times 15}{9 \times 16} = -\dfrac{1 \times 5}{3 \times 4} = -\dfrac{5}{12}$ | $= -0.56$ | $\begin{aligned} &= 4x - 7x - 11y + 5y \\ &= -3x - 6y \end{aligned}$ |

| ⑩ $36xy^2 \div 9xy \times 7y$ | ⑪ $9a^2b - 3ab \times 2a$ | ⑫ $7(2x - y) + 3(2x + 5y)$ |
|---|---|---|
| $\begin{aligned} &= \dfrac{36xy^2 \times 7y}{9xy} \\ &= 28y^2 \end{aligned}$ | $\begin{aligned} &= 9a^2b - 6a^2b \\ &= 3a^2b \end{aligned}$ | $\begin{aligned} &= 14x - 7y + 6x + 15y \\ &= 14x + 6x - 7y + 15y \\ &= 20x + 8y \end{aligned}$ |

| ⑬ $-6x(5x + 2y)$ | ⑭ $(56ab - 21a) \div 7a$ | ⑮ $(a + 6)(b - 4)$ |
|---|---|---|
| $= -30x^2 - 12xy$ | $= 8b - 3$ | $= ab - 4a + 6b - 24$ |

| ⑯ $(x - 4)(x - 5)$ | ⑰ $(x + 9)^2$ | ⑳ $\begin{cases} 2x - 3y = 14 & \cdots① \\ 3x + y = 10 & \cdots② \end{cases}$ |
|---|---|---|
| $= x^2 - 9x + 20$ | $= x^2 + 18x + 81$ | $\begin{aligned} &②\times 3 \\ &9x + 3y = 30 \cdots②' \\ &①+②' \\ &\quad 11x = 441 \\ &\quad\ x = 4 \\ &x = 4 を②に代入 \\ &3 \times 4 + y = 10 \\ &12 + y = 10 \\ &y = 10 - 12 \\ &\quad y = -2 \\ &(x, y) = (\,4\,,\,-2\,) \end{aligned}$ |

| ⑱ $(x + 7)(x - 7)$ | ⑲ $5x - 6 = 8x + 15$ | |
|---|---|---|
| $= x^2 - 49$ | $\begin{aligned} 5x - 8x &= 15 + 6 \\ -3x &= 21 \\ x &= -7 \end{aligned}$ | |

◆①～⑱の計算をせよ。また、⑲～⑳の方程式を解け。

| ① $-6+11$ | ② $(-4)\times(-9)$ | ③ $63\div(-9)$ |
|---|---|---|
| $=5$ | $=36$ | $=-7$ |

① $-6+11$

$=5$

② $(-4)\times(-9)$

$=36$

③ $63\div(-9)$

$=-7$

④ $15-12\div(-3)$

$=15-(-4)$
$=15+4$
$=19$

⑤ $\dfrac{2}{5}-\dfrac{5}{6}$

$=\dfrac{12}{30}-\dfrac{25}{30}=-\dfrac{13}{30}$

⑥ $(-\dfrac{4}{15})\times(-\dfrac{25}{12})$

$=\dfrac{4\times25}{15\times12}=\dfrac{1\times5}{3\times3}=\dfrac{5}{9}$

⑦ $-\dfrac{5}{14}\div\dfrac{10}{21}$

$=-\dfrac{5\times21}{14\times10}=-\dfrac{1\times3}{2\times2}=-\dfrac{3}{4}$

⑧ $-3.6\div0.4$

$=-9$

⑨ $12x-8y-7x-6y$

$=12x-7x-8y-6y$
$=5x-14y$

⑩ $-48x^2y\div8xy\div3x$

$=-\dfrac{48x^2y}{8xy\times3x}$
$=-2$

⑪ $15ab-12a^2b\div3a$

$=15ab-4ab$
$=11ab$

⑫ $5(3x-2y)-4(2x-y)$

$=15x-10y-8x+4y$
$=15x-8x-10y+4y$
$=7x-6y$

⑬ $9x(6x-y)$

$=54x^2-9xy$

⑭ $(-20a^2b+4ab)\div(-4ab)$

$=5a-1$

⑮ $(x+2)(y+5)$

$=xy+5x+2y+10$

⑯ $(x+7)(x-2)$

$=x^2+5x-14$

⑰ $(x-4)^2$

$=x^2-8x+16$

⑳ $\begin{cases} 4x-y=13 \quad \cdots① \\ 3x-2y=6 \quad \cdots② \end{cases}$

①×2
$8x-2y=26\cdots①'$
①'－②
$5x=20$
$x=4$
$x=4$を①に代入
$4\times4+y=13$
$16+y=13$
$-y=13-16$
$-y=-3$
$y=3$
$(x,y)=(\,4\,,\,3\,)$

⑱ $(x+1)(x-1)$

$=x^2-1$

⑲ $7x-3=11x-15$

$7x-11x=-15+3$
$-4x=-12$
$x=3$