1. $3-\left\{\frac{1}{2}-2-\left(-\frac{2}{5}\right)\div 2\right\}\times 5-\frac{3}{2}$ 을 계산하면?

① 8 ② 13 ③ $-\frac{13}{10}$ ④ $\frac{19}{2}$ ⑤ $-\frac{13}{5}$

해설

$$3-\left\{\frac{1}{2}-2-\left(-\frac{2}{5}\right)\div 2\right\}\times 5-\frac{3}{2}$$

$$=3-\left\{\frac{1}{2}-2-\left(-\frac{2}{5}\right)\times\frac{1}{2}\right\}\times 5-\frac{3}{2}$$

$$=3-\left(\frac{1}{2}-2+\frac{1}{5}\right)\times 5-\frac{3}{2}$$

$$=3-\left(-\frac{13}{10}\right)\times 5-\frac{3}{2}$$

$$=3+\frac{13}{2}-\frac{3}{2}=3+5=8$$

2. $4 \div \left\{3 - 2 \times \left(-\frac{1}{4}\right)\right\} - \frac{3}{5}$ 을 계산하여라.

▶ 답:

▷ 정답: $\frac{19}{35}$

해설

$$4 \div \left\{3 - 2 \times \left(-\frac{1}{4}\right)\right\} - \frac{3}{5} = 4 \div \left(3 + \frac{1}{2}\right) - \frac{3}{5}$$
$$= 4 \times \frac{2}{7} - \frac{3}{5} = \frac{8}{7} - \frac{3}{5}$$
$$= \frac{8 \times 5 - 3 \times 7}{35} = \frac{19}{35}$$

3. 다음을 계산하여라.

$$\left\{\left(-\frac{2}{3}\right)^3 \div \left|-\frac{16}{9}\right| + \frac{2}{3}\right\} \times (-2^2) - 7$$

▶ 답 :

▷ 정답 : -9

해설

$$\left\{\left(-\frac{2}{3}\right)^3 \div \left|-\frac{16}{9}\right| + \frac{2}{3}\right\} \times (-2^2) - 7$$

$$= \left\{\left(-\frac{8}{27}\right) \div \frac{16}{9} + \frac{2}{3}\right\} \times (-4) - 7$$

$$= \left\{\left(-\frac{8}{27}\right) \times \frac{9}{16} + \frac{2}{3}\right\} \times (-4) - 7$$

$$= \left(-\frac{1}{6} + \frac{2}{3}\right) \times (-4) - 7$$

$$= \frac{1}{2} \times (-4) - 7 = -9$$

4. 다음 식을 계산하여라.

$(-12)\times\left[\frac{1}{3}-\left\{\frac{3}{4}\div\left(-\frac{9}{16}\right)+2\right\}\right]$

▶ 답 :

▷ 정답 : 4 또는 +4

해설

$(-12)\times\left[\frac{1}{3}-\left\{\frac{3}{4}\div\left(-\frac{9}{16}\right)+2\right\}\right]$

$=(-12)\times\left[\frac{1}{3}-\left\{\frac{3}{4}\times\left(-\frac{16}{9}\right)+2\right\}\right]$

$=(-12)\times\left\{\frac{1}{3}-\left(-\frac{4}{3}+2\right)\right\}$

$=(-12)\times\left(\frac{1}{3}-\frac{2}{3}\right)=(-12)\times\left(-\frac{1}{3}\right)=4$

5. 다음 식을 아래 순서에 따라 계산할 때, □ 안에 알맞은 수를 써넣어라.

$$-8-\left\{\frac{3}{4}\div\left(\frac{3}{2}-\frac{1}{4}\right)-1\right\}\times(-3)=-8-\left\{\frac{3}{4}\div\square-1\right\}\times(-3)$$

① ② ③ ④ ⑤

$$=-8-\left(\square-1\right)\times(-3)$$

$$=-8-\square\times(-3)$$

$$=-8-\square$$

$$=\square$$

▶ 답 :

▶ 답 :

▶ 답 :

▶ 답 :

▶ 답 :

▷ 정답 : $\frac{5}{4}$

▷ 정답 : $\frac{3}{5}$

▷ 정답 : $-\frac{2}{5}$

▷ 정답 : $\frac{6}{5}$

▷ 정답 : $-\frac{46}{5}$

해설

① $\frac{3}{2}-\frac{1}{4}=\frac{6}{4}-\frac{1}{4}=\frac{5}{4}$

② $\frac{3}{4}\div\frac{5}{4}=\frac{3}{4}\times\frac{4}{5}=\frac{3}{5}$

③ $\frac{3}{5}-1=\frac{3}{5}-\frac{5}{5}=-\frac{2}{5}$

④ $\left(-\frac{2}{5}\right)\times(-3)=\frac{6}{5}$

⑤ $(-8)-\frac{6}{5}=-\frac{40}{5}-\frac{6}{5}=-\frac{46}{5}$

6. $A=(-2)^2\times(-1)^3\div\frac{8}{3}+1$, $B=-3^2\div\frac{18}{5}\times(-1.4)$ 일 때, $A+B$ 의 값을 구하라.

① -0.5 ② 0.5 ③ -3.5 ④ 3.5 ⑤ 3

해설

$$A=4\times(-1)\times\frac{3}{8}+1$$
$$=(-4)\times\frac{3}{8}+1$$
$$=\left(-\frac{3}{2}\right)+1$$
$$=-\frac{1}{2}$$
$$B=-9\times\frac{5}{18}\times(-1.4)=\left(-\frac{5}{2}\right)\times(-1.4)=3.5$$
$$\therefore\ A+B=-\frac{1}{2}+3.5=-0.5+3.5=3$$

7. 다음을 계산하면?

$$2-\left[\left\{\left(-\frac{3}{2}\right)^2-8\div\frac{4}{3}\right\}-(-5)\right]$$

① $\frac{1}{4}$ ② $\frac{1}{2}$ ③ $\frac{3}{4}$ ④ 1 ⑤ $\frac{5}{4}$

해설

$$\begin{aligned}
&2-\left[\left\{\left(-\frac{3}{2}\right)^2-8\div\frac{4}{3}\right\}-(-5)\right]\\
&=2-\left[\left\{\left(+\frac{9}{4}\right)-8\div\frac{4}{3}\right\}-(-5)\right]\\
&=2-\left[\left\{\left(+\frac{9}{4}\right)-8\times\frac{3}{4}\right\}-(-5)\right]\\
&=2-\left[\left\{\left(+\frac{9}{4}\right)-6\right\}-(-5)\right]\\
&=2-\left\{\left(-\frac{15}{4}\right)+(+5)\right\}\\
&=2-\frac{5}{4}\\
&=\frac{3}{4}
\end{aligned}$$

8. 다음을 계산하시오.

$$\left[\frac{2}{3}-\left\{\left(-\frac{2}{3}\right)\div\left(-\frac{4}{7}\right)-1\right\}\times 2\right]\times(-7)$$

▶ 답 :

▷ 정답 : $-\frac{7}{3}$

해설

$$\left[\frac{2}{3}-\left\{\left(-\frac{2}{3}\right)\div\left(-\frac{4}{7}\right)-1\right\}\times 2\right]\times(-7)$$

$$=\left[\frac{2}{3}-\left\{\left(-\frac{2}{3}\right)\times\left(-\frac{7}{4}\right)-1\right\}\times 2\right]\times(-7)$$

$$=\left\{\frac{2}{3}-\left(\frac{7}{6}-1\right)\times 2\right\}\times(-7)$$

$$=\left(\frac{2}{3}-\frac{1}{3}\right)\times(-7)$$

$$=\frac{1}{3}\times(-7)=-\frac{7}{3}$$

9. $\frac{1}{3}\times\{-2+3\times(-1)^3\}+\frac{3}{2}$ 을 계산하면?

① $-\frac{1}{6}$ ② $-\frac{1}{2}$ ③ $\frac{5}{6}$ ④ $\frac{3}{2}$ ⑤ $-\frac{5}{3}$

해설

$$\begin{aligned}(\text{준식}) &= \frac{1}{3}\times\{-2+3\times(-1)\}+\frac{3}{2}\\ &= \frac{1}{3}\times(-2-3)+\frac{3}{2}\\ &= -\frac{5}{3}+\frac{3}{2}\\ &= \frac{-10+9}{6}\\ &= -\frac{1}{6}\end{aligned}$$

10. 다음 식을 계산하여라.

$-3^2 + \{(-2)^3 + (-4) \times (-7)\}$

▶ 답 :

▷ 정답 : 11 또는 +11

해설

$$\begin{aligned}(\text{준식}) &= -9 + \{-8 + (-4) \times (-7)\} \\ &= -9 + (-8 + 28) \\ &= -9 + 20 = 11\end{aligned}$$

11. 다음 식을 계산하여라.

$9-[-2^2-(+6)\times\{-4+(-1)^2\}\div 3]$

▶ 답 :

▷ 정답 : 7

해설

$$\begin{aligned}(\text{준식}) &= 9-[-4-(+6)\times\{-4+1\}\div 3] \\ &= 9-\{-4-(+6)\times(-3)\div 3\} \\ &= 9-\{(-4)-(-6)\} = 9-2=7\end{aligned}$$

12. 다음을 계산하여라.

$$-2+\left\{1-\left(-\frac{1}{2}\right)^2\times\frac{9}{4}\right\}\div\left(-\frac{1}{4}\right)$$

① -4 ② 4 ③ $-\frac{15}{4}$ ④ $\frac{15}{4}$ ⑤ -3

해설

$$-2+\left\{1-\left(-\frac{1}{2}\right)^2\times\frac{9}{4}\right\}\div\left(-\frac{1}{4}\right)$$
$$=-2+\left\{1-\left(+\frac{1}{4}\right)\times\frac{9}{4}\right\}\times(-4)$$
$$=-2+\frac{7}{16}\times(-4)$$
$$=-2+\left(-\frac{7}{4}\right)$$
$$=-\frac{15}{4}$$

13. 다음을 계산하여라.

$$-6+\left\{\left|\frac{5}{4}-\frac{4}{3}\right|\div\left(-\frac{1}{2}\right)^2\right\}\times(-3)$$

▶ 답:

▷ 정답: -7

해설

$$-6+\left\{\left|\frac{5}{4}-\frac{4}{3}\right|\div\left(-\frac{1}{2}\right)^2\right\}\times(-3)$$
$$=-6+\left(\left|-\frac{1}{12}\right|\div\frac{1}{4}\right)\times(-3)$$
$$=-6+\left(\frac{1}{12}\times4\right)\times(-3)$$
$$=-6+(-1)=-7$$

14. $1-\frac{1}{3}\times\left[5-\left\{\left(-\frac{1}{2}\right)\times(-2)+1\right\}\right]$ 을 계산하면?

① -1 ② 0 ③ 1 ④ 3 ⑤ $-\frac{1}{2}$

해설

$$\begin{aligned}(\text{준식}) &= 1-\frac{1}{3}\times\{5-(1+1)\}\\ &= 1-\frac{1}{3}\times(5-2)\\ &= 1-\frac{1}{3}\times 3\\ &= 1-1=0\end{aligned}$$