

change Problem #16

$$\textcircled{1} \left(\frac{2}{3}\right)^2 - \frac{2}{1}$$

$$\frac{4}{9} - \frac{18}{9}$$

$$\boxed{\frac{-14}{9}}$$

$$\textcircled{2} 5 \left(\frac{3}{4} - \frac{4}{4}\right)^2$$

$$\frac{5}{1} \left(\frac{-1}{4}\right)^2$$

$$\frac{5}{1} \cdot \frac{1}{16} = \boxed{\frac{5}{16}}$$

$$\textcircled{3} \frac{3}{2} \left(\frac{7}{5}\right) - \frac{3}{1} \left(\frac{3}{10}\right)$$

$$\frac{21}{10} - \frac{9}{10}$$

$$\frac{12}{10} = \boxed{\frac{6}{5}}$$

$$\textcircled{4} \left(\frac{4}{1} - \frac{5}{3}\right)^2$$

$$\left(\frac{12}{3} - \frac{5}{3}\right)^2$$

$$\left(\frac{7}{3}\right)^2 = \boxed{\frac{49}{9}}$$

$$\textcircled{5} \sqrt{5} + 3\sqrt{5}$$

$$\boxed{4\sqrt{5}}$$

$$\textcircled{7} \sqrt{2}\sqrt{14} \text{ or } \sqrt{2}\sqrt{2}\sqrt{7}$$

$$\sqrt{28}$$

$$\sqrt{4}\sqrt{7}$$

$$\boxed{2\sqrt{7}}$$

$$\boxed{2\sqrt{7}}$$

$$\textcircled{6} \sqrt{20} + \sqrt{45}$$

$$\sqrt{4}\sqrt{5} + \sqrt{9}\sqrt{5}$$

$$2\sqrt{5} + 3\sqrt{5}$$

$$\boxed{5\sqrt{5}}$$

$$\textcircled{8} 3\sqrt{7} \cdot 2\sqrt{2}$$

$$\boxed{6\sqrt{14}}$$

$$\textcircled{9} \sqrt{100} + \sqrt{49}$$

$$10 + 7$$

$$\boxed{17}$$

$$\textcircled{10} \sqrt{40} + \sqrt{90}$$

$$\sqrt{4}\sqrt{10} + \sqrt{9}\sqrt{10}$$

$$2\sqrt{10} + 3\sqrt{10}$$

$$\boxed{5\sqrt{10}}$$

$$\textcircled{11} \sqrt{4} + \sqrt{9} + \sqrt{16}$$

$$2 + 3 + 4$$

$$\boxed{9}$$

$$\textcircled{12} (2x-7)(3x-8)$$

$$6x^2 - 16x - 21x + 56$$

$$\boxed{6x^2 - 37x + 56}$$

$$\textcircled{13} (3x-4)(3x+4)$$

$$9x^2 + 12x - 12x - 16$$

$$\boxed{9x^2 - 16}$$

$$\textcircled{14} 12x^2 + 13x + 3$$

$$12x^2 + 9x + 4x + 3$$

$$3x(\underline{4x+3}) + 1(\underline{4x+3})$$

$$\boxed{(3x+1)(4x+3)}$$

$$\textcircled{15} 2x^2 + 9x + 4$$

$$2x^2 + 8x + x + 4$$

$$2x(\underline{x+4}) + 1(\underline{x+4})$$

$$\boxed{(2x+1)(x+4)}$$

change from +

$$\begin{aligned} \textcircled{16} \quad & 3x^2 - 5x - 12 \\ & 3x^2 + 4x - 9x - 12 \\ & x(3x+4) - 3(3x+4) \end{aligned}$$

$$(x-3)(3x+4)$$

$$\begin{array}{r} -36x^2 \\ 4x \quad -9x \\ -5x \end{array}$$

$$\begin{aligned} \textcircled{17} \quad & 2x^2 - 11x + 12 \\ & 2x^2 - 8x - 3x + 12 \\ & 2x(x-4) - 3(x-4) \end{aligned}$$

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

$$\begin{array}{r} 24x^2 \\ -8x \quad -3x \\ -11x \end{array}$$

$$\textcircled{18} \quad \frac{x^3 \cdot x^8}{x^{11}}$$

$$\textcircled{19} \quad \frac{x^8}{x^3} = x^5$$

$$\textcircled{20} \quad \frac{x^3}{x^8} = x^{-5} = \frac{1}{x^5}$$

$$\textcircled{21} \quad (x^3)^8 = x^{24}$$

$$\textcircled{22} \quad 8^0 = 1$$

$$\textcircled{23} \quad 8^{-2}$$

also:

$$\begin{aligned} x^0 &= 1 \\ (-5)^0 &= 1 \\ -5^0 &= 1 \end{aligned}$$

$$= \frac{1}{8^2} = \frac{1}{64}$$