

Instruction: Find the best way to calculate the followings using proper arithmetic rules. Show your work. No calculators.

1.

$$\begin{aligned} 2.5 + 3.2 + 7.5 + 2.8 &= 2.5 + 7.5 + 3.2 + 2.8 \\ &= (2.5 + 7.5) + (3.2 + 2.8) \\ &= 10 + 6 = \boxed{16} \end{aligned}$$

2.

$$\begin{aligned} 2.328 + (5.342 + 3.672) &= (5.342 + 3.672) + 2.328 \\ &= 5.342 + (3.672 + 2.328) \\ &= 5.342 + 6 = \boxed{11.342} \end{aligned}$$

3.

$$\begin{aligned} 6.25 \times 0.16 + 264 \times 0.0625 + 5.2 \times 6.25 + 0.625 \times 20 \\ &= 6.25 \times 0.16 + (2.64 \times 100) \times 0.0625 + 5.2 \times 6.25 + 0.625 \times (10 \times 2) \\ &= 6.25 \times 0.16 + 2.64 \times (100 \times 0.0625 + 5.2 \times 6.25 + (0.625 \times 10) \times 2) \\ &= 6.25 \times 0.16 + 2.64 \times 6.25 + 5.2 \times 6.25 + 6.25 \times 2 \\ &= 6.25 \times (0.16 + 2.64 + 5.2 + 2) \\ &= 6.25 \times 10 = \boxed{62.5} \end{aligned}$$

4.

$$\begin{aligned} 0.125 \times 0.25 \times 0.5 \times 64 &= 0.125 \times (0.25 \times 0.5) \times (64) \\ &= 0.125 \times 0.125 \times 64 \\ &= \frac{1}{8} \times \frac{1}{8} \times 64 \\ &= \frac{1}{64} \times 64 = \boxed{1} \end{aligned}$$

5.

$$\begin{aligned} (123456 + 234561 + 345612 + 456123 + 561234 + 612345) \div 7 \\ &= [(1 + 2 + 3 + 4 + 5 + 6) \times 111,111] \div 7 \\ &= 21 \times 111,111 \times \frac{1}{7} \\ &= 21 \times \frac{1}{7} \times 111,111 \\ &= 3 \times 111,111 = \boxed{333,333} \end{aligned}$$

Name:

Date:

6.

$$\begin{aligned} 0.525 \div 13.125 \div 4 \times 85.2 &= 0.525 \div (13.125 \times 4) \times 85.2 \\ &= 0.525 \div (52.5) \times 85.2 \\ &= 0.01 \times 85.2 = \boxed{0.852} \end{aligned}$$

7.

$$\begin{aligned} 9 \times 1.7 + 9.1 \div 1.7 - 5 \times 1.7 + 4.5 \div 1.7 &= 9 \times 1.7 - 5 \times 1.7 + 9.1 \div 1.7 + 4.5 \div 1.7 \\ &= 1.7 \times (9 - 5) + (9.1 + 4.5) \div 1.7 \\ &= 1.7 \times 4 + 13.6 \div 1.7 \\ &= 6.8 + 8 = \boxed{14.8} \end{aligned}$$

8.

$$\begin{aligned} 124.68 + 324.68 + 524.68 + 724.68 + 924.68 \\ &= (100 + 24.68) + (300 + 24.68) + (500 + 24.68) + (700 + 24.68) + (900 + 24.68) \\ &= 100 + 24.68 + 300 + 24.68 + 500 + 24.68 + 700 + 24.68 + 900 + 24.68 \\ &= (100 + 300 + 500 + 700 + 900) + 24.68 + 24.68 + 24.68 + 24.68 + 24.68 \\ &= 2500 + 5 \times 24.68 \\ &= 2500 + 123.4 = \boxed{2623.4} \end{aligned}$$

9. $\boxed{27.785}$

10.

$$\begin{aligned} 10 \div 14 + 35 \div 25 - 756 \div 540 + 72 \div 56 &= \frac{10}{14} + \frac{35}{25} - \frac{756}{540} + \frac{72}{56} \\ &= \frac{5}{7} + \frac{7}{5} - \frac{7}{5} + \frac{9}{7} \\ &= \frac{5}{7} + \left(\frac{7}{5} - \frac{7}{5}\right) + \frac{9}{7} \\ &= \frac{5}{7} + \frac{9}{7} = \boxed{2} \end{aligned}$$