

$$\begin{aligned}
 & \textcircled{1}. 3.14 \times 67 + 8.2 \times 31.4 - 90 \times 0.314 \\
 &= 3.14 \times 67 + 82 \times 3.14 - 9 \times 3.14 \\
 &= 3.14 \times (67 + 82 - 9) \\
 &= 3.14 \times 140 \\
 &= 439.6.
 \end{aligned}$$

$$\begin{aligned}
 & 2. 12.65 \div 12.5 \div 0.8 \\
 &= 12.65 \div (12.5 \times 0.8) \\
 &= 12.65 \div 10 \\
 &= 1.265.
 \end{aligned}$$

$$\begin{aligned}
 & 3. 16.92 \div [2.64 \times (5.6 - 2.1) + 0.16] \\
 &= 16.92 \div (2.64 \times 3.5 + 0.16) \\
 &= 16.92 \div (9.24 + 0.16) \\
 &= 16.92 \div 9.4 \\
 &= 1.8.
 \end{aligned}$$

$$\begin{aligned}
 & 4. (32 \times 0.63 \times 0.95) \div (1.6 \times 21 \times 1.9) \\
 &= (32 \div 1.6) \times (0.63 \div 21) \times (0.95 \div 1.9) \\
 &= 20 \times 0.03 \times 0.5 \\
 &= 0.3.
 \end{aligned}$$

5. 由 $[a]$ 表示不超过 a 的最大整数, $\{a\}$ 表示 a 的小数部分, 得

$$[4.1] = 4, \{2.6\} = 0.6, [3.5] = 3,$$

由 $a * b = (a + b) \div (b - 1)$, 得

$$\{2.6\} * [3.5] = (0.6 + 3) \div (3 - 1) = 3.6 \div 2 = 1.8,$$

所以 $[4.1] + \{2.6\} * [3.5] = 4 + 1.8 = 5.8$.