Simplifying Expressions

When an expression contains more than one operation, parentheses ( ) can be used to show which computation should be done. Parentheses are one type of grouping symbol.

Do the computation inside the parentheses first.

Evaluate $(2 + 8) \times 3.$

\[
\begin{align*}
10 & \times 3 = 30 \\
\end{align*}
\]

Evaluate $2 + (8 \times 3)$.

\[
\begin{align*}
2 & + 24 = 26 \\
\end{align*}
\]

Some expressions contain more than one set of parentheses.

Do the computation inside each pair of parentheses first.

Evaluate $(4 + 9) - (30 ÷ 5)$.

\[
\begin{align*}
13 & - 6 = 7 \\
\end{align*}
\]

After you solve the computations inside the parentheses, use the order of operations to choose which computation to solve next:

Exponents

Multiplication and division from left to right

Addition and subtraction from left to right

1. $(16 + 4) ÷ 10$
2. $(16 ÷ 4) + (10 - 3)$
3. $8^2 ÷ (2 \times 4)$

4. $27 - (5 \times 3)$
5. $(4 \times 6) ÷ 6 + 6$
6. $(36 ÷ 6) \times 2^2$

7. Evaluate $11 \times (8 - n)$ for $n = 4$. ____________