Revision to Tyler Wallace's
"Order of Operations:
Introduction to Order of Operations"

Note that the video does not make use of the equal sign. The examples are worked out below.

Minute 2:00 of the Video

Example 1: The problem is to simplify $5 - 3(2 + 4^2)$.

Steps:

1. We must first simplify what is inside the parenthesis. Since there is an exponent and addition inside the parenthesis, we must simplify the exponent first and then perform addition. We get:
    1. $5 - 3(2 + 4^2) = 5 - 3(2 + 16)$ (Note: the video does not make use of the equal sign).
    2. Continuing the work on the parenthesis, we add $2 + 16$ to get 18.
    3. So, now our expression has been reduced to $5 - 3(18)$
2. So far we have $5 - 3(2 + 4^2) = 5 - 3(18)$. Let's finish solving this:
    1. Again, by order of operations, we perform multiplication first, so $5 - 3(18) = 5 - 54$.
    2. Finally we can subtract to get $5 - 54 = -49$.
3. So we have $5 - 3(2 + 4^2) = -49$

To summarize, here's what we did:

$5 - 3(2 + 4^2)$

$= 5 - 3(2 + 16)$

$= 5 - 3(18)$

$= 5 - 54$

$= -49$

Minute 3:05 of the Video

Example 2: Simplify $30 \div 5(2) + (4 - 7)^2$

$30 \div 5(2) + (4 - 7)^2$

$= 30 \div 5(2) + (-3)^2$

$= 30 \div 5(2) + 9$

$= 6(2) + 9$

$= 12 + 9 = 21$