The Java expression:

3 * 5 - 8 / 7

Operators NOT drawn Below.

Step 1:
Draw ONLY the operands At the BOTTOM of your Work page.
The Java expression:

3 * 5 - 8 / 7

Step 2:
Find an innermost strongest Operator
See: the circled * multiply
Step 3:
Draw an enclosing
Rectangle around:

a. The left operand 3
b. The operator *
c. The right operand 5
The Java expression:

\[
\begin{array}{c}
3 \times 5 - 8 \div 7
\end{array}
\]

Step 4:
Draw the corresponding Tree Branch:

a. The operator *
   1) In an oval
   2) ABOVE the operands
   3) BETWEEN the operands

b. Two legs from the operator oval DOWN to the operands
The Java expression:

\[ 3 \times 5 \ - \ \frac{8}{7} \]

Step 5:

Enclose another innermost Strongest operator. 
NEVER let the box lines CROSS.
The Java expression:

\[3 \times 5 - \frac{8}{7}\]

Step 6:
Draw the Branch
For the new box.
NEVER let the legs CROSS.
The Java expression:

\[ 3 \times 5 - \frac{8}{7} \]

**Step 7:**
Enclose the remaining Operator and its TWO operands.
**DO NOT** let the box lines CROSS.
NOTICE how the new box SURROUNDS the two old Boxes.
Step 8A:
Draw the tree branch for
The new box.
Do NOT let TWO legs come
down into the same operand.
THIS IS SHOWN DONE
WRONG in this slide.

These legs are WRONG
WRONG WRONG

The Java expression:

```
3     *      5
-     8     /     7
```
The Java expression:

\[
\begin{align*}
3 & \times 5 & - & 8 & \div 7 \\
\end{align*}
\]

Step 8:
Draw the tree branch for The new box.
Do NOT let TWO legs come down into the same operand.
The topmost oval is called The **ROOT**.
The little leg above the root is called the **STUB**.
The Java expression:

\[
\begin{array}{c}
3 \times 5 - 8 / 7 \\
\end{array}
\]

Step 9:
Number the operator Ovals FROM TOP to bottom.
Start EACH number with the hash mark #
Number FROM 1 consecutively.
The Java expression:

\[
\begin{array}{c}
3 * 5 - 8 / 7
\end{array}
\]

Step 10:
Entable the Tree.
a. Left column is operator number with # omitted.
b. Middle column is operator symbol
c. Right column is destinations for legs
   1) Either an original operand
   2) Or a # oval number.

\[
\begin{array}{c|c|c}
1 & - & \#1 \\
2 & * & \#2 \#3 \\
3 & / & \#3 \\
\end{array}
\]

\[
\begin{array}{c}
3 * 5 - 8 / 7
\end{array}
\]
The Java expression:

\[ 3 \times 5 - \frac{8}{7} \]

EnTABLEment NOTES:

- Hash # indicates Leg is an oval.
- No HASH Indicates leg is An original operand.