4.1 Quiz.

Assume that a, b, c, and d are as defined, and evaluate the following expressions:

\[
\begin{align*}
    a &= 20; \quad b = -2; \\
    c &= 0; \quad d = 1;
\end{align*}
\]

1. \(a > b\)
2. \(b > d\)
3. \(a > b && c > d\)
4. \(a == b\)
5. \(a && b > c\)
6. \(\neg\neg b\)

Assume that a, b, c, and d are as defined, and evaluate the following expressions:

\[
\begin{align*}
    a &= 2; \quad b = \begin{bmatrix} 1 & -2 \\ 0 & 10 \end{bmatrix}; \\
    c &= \begin{bmatrix} 0 & 1 \\ 2 & 0 \end{bmatrix}; \quad d = \begin{bmatrix} -2 & 1 & 2 \\ 0 & 1 & 0 \end{bmatrix};
\end{align*}
\]

7. \(\neg(a > b)\)
8. \(a > c && b > c\)
9. \(c \leq d\)
10. \(\text{logical}(d)\)
11. \(a \times b > c\)
12. \(a \times (b > c)\)

Assume that a, b, c, and d are as defined. Explain the order in which each of the following expressions are evaluated, and specify the results in each case:

\[
\begin{align*}
    a &= 2; \quad b = 3; \\
    c &= 10; \quad d = 0;
\end{align*}
\]

13. \(a \times b^2 > a \times c\)
14. \(d || b > a\)
15. \((d | b) > a\)
Assume that \( a, b, c, \) and \( d \) are as defined, and evaluate the following expressions:

\[
\begin{align*}
a &= 20; & b &= -2; \\
c &= 0; & d &= 'Test'; \\
16. & \text{ isinf}(a / b) \\
17. & \text{ isinf}(a / c) \\
18. & a > b && \text{ischar}(d) \\
19. & \text{isempty}(c) \\
20. & (\sim a) & b \\
21. & (\sim a) + b
\end{align*}
\]